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THE

LAND OF THE MIDNIGHT SUN:

SUMMER AND WINTER JOURNEYS

THROUGH

SWEDEN, NORWAY, LAPLAND, AND NORTHERN FINLAND.

WITH DESCRIPTIONS OF THE INNER LIFE OF THE PEOPLE, THEIR MANNERS AND CUSTOMS, THE PRIMITIVE ANTIQUITIES, ETC.

BY PAUL B. DU CHAILLU,

AUTHOR OF

"EXPLORATIONS IN EQUATORIAL AFRICA," "A JOURNEY TO ASHANGO LAND," ETC.

IN TWO VOLUMES.—VOL. I.

WITH MAP AND 235 ILLUSTRATIONS.

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PREFACE.

THE account of the Peninsula of Scandinavia, and of the life of its people, given in these volumes, is the result of a series of journeys made at different times, from 1871 to 1878, embracing a sojourn in the country of nearly five years.

From the beginning, my intention was to write something more than a mere narrative of travel. The object of my journeys was to make a study of the physical characteristics of the country, and to closely observe the manners and customs of its inhabitants, by participating in the home-life of all classes. I felt sure that no such description could be faithful unless I so won their affection and confidence that they would consider me as one of themselves. In pursuance of this purpose, I acquired some knowledge of their languages, knowing that there could be no genuine sympathy between the rural population and myself, and I should obtain no real acquaintance with them, if we could not converse with each other.

In order to become thoroughly acquainted with the country, I travelled in an irregular course, by routes often crossing each other, and at different seasons of the year, either from the Baltic to the Polar Sea, or from the east to the west. I have observed the whole coast from Haparanda to the extreme north-eastern point of Norway, a distance of 3200 miles, the greater part of it both in winter and in summer; and, besides, I have sailed on almost every fjord, whose shores have in the aggregate an extent of 3000 miles or more.

I have paid special attention to the prehistoric and Viking ages, and have availed myself of the most recent researches of the Norwegian and Swedish archæologists in that direction, and of the illustrations lately published, to aid me in eluci-

dating those subjects, as their remains throw much light on the character and customs of the present inhabitants—probably the most independent, honest, and faithful of the European nationalities.

I have depended solely on personal observations for my information, and the reader may be assured that my descriptions of primitive customs are not taken from hearsay, but from the evidence of my own eyes. On scientific points I have consulted the highest local authorities.

My illustrations are mostly, the portraits entirely, from photographs, which have been taken exclusively for use in this work. Those representing winter scenes in Lapland are the work of a Swedish artist—Hasse Bergman—who has visited that country.

The title of the book is derived from one of the most striking phenomena in the north of the country, and one which I witnessed with wonder and admiration on many occasions.

I have adopted the spelling of each country when referring to the names of places and people, etc.; but, as the Swedish and Norwegian languages are very similar, and both now in a state of transition, gradually conforming the spelling to one standard, no confusion will result from this plan.

I submit this work to the public, with the hope that they may share with me in the interest attaching to the Scandinavian people and their country.

I cannot refrain, before sending these volumes to press, from thanking my old friend and publisher, Mr. Murray, for the kind and liberal manner in which he has always attended to my interests in the publication of my books of travels.

PAUL B. DU CHAILLU.

LONDON, *October*, 1881.

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MAP OF SCANDINAVIA ..... *In cover-pocket.*

THE LAND OF THE MIDNIGHT SUN.

CHAPTER I.

Characteristic Features of the Peninsula of Scandinavia.

THERE is a beautiful country far away towards the icy North. It is a glorious land; with snowy, bold, and magnificent mountains; deep, narrow, and well-wooded valleys; bleak plateaux and slopes; wild ravines; clear and picturesque lakes; immense forests of birch, pine, and fir trees, the solitude of which seems to soothe the restless spirit of man; large and superb glaciers, unrivalled elsewhere in Europe for size; arms of the sea, called fjords, of extreme beauty, reaching far inland in the midst of grand scenery; numberless rivulets, whose crystal waters vary in shade and color as the rays of the sun strike upon them on their journey towards the ocean, tumbling in countless cascades and rapids, filling the air with the music of their fall; rivers and streams which, in their hurried course from the heights above to the chasm below, plunge in grand water-falls, so beautiful, white, and chaste, that the beholder never tires of looking at them; they appear like an enchanting vision before him, in the reality of which he can hardly believe. Contrasted with these are immense areas of desolate and barren land and rocks, often covered with boulders which in many places are piled here and there in thick masses, and swamps and moorlands, all so dreary that they impress the stranger with a feeling of loneliness from which he tries in vain to escape. There are also many exquisite sylvan landscapes, so quiet, so picturesque, by the sea and lakes, by the hills and the mountain-sides, by the rivers and in the glades, that

one delights to linger among them. Large and small tracts of cultivated land or fruitful glens, and valleys bounded by woods or rocks, with farm-houses and cottages, around which fair-haired children play, present a striking picture of contentment. Such are the characteristic features of the peninsula of Scandinavia, surrounded almost everywhere by a wild and austere coast. Nature in Norway is far bolder and more majestic than in Sweden; but certain parts of the coast along the Baltic present charming views of rural landscape.

From the last days of May to the end of July, in the northern part of this land, the sun shines day and night upon its mountains, fjords, rivers, lakes, forests, valleys, towns, villages, hamlets, fields, and farms; and thus Sweden and Norway may be called "The Land of the Midnight Sun." During this period of continuous daylight the stars are never seen, the moon appears pale, and sheds no light upon the earth. Summer is short, giving just time enough for the wild-flowers to grow, to bloom, and to fade away, and barely time for the husbandman to collect his harvest, which, however, is sometimes nipped by a summer frost. A few weeks after the midnight sun has passed, the hours of sunshine shorten rapidly, and by the middle of August the air becomes chilly and the nights colder, although during the day the sun is warm. Then the grass turns yellow, the leaves change their color, and wither, and fall; the swallows and other migrating birds fly towards the south; twilight comes once more; the stars, one by one, make their appearance, shining brightly in the pale-blue sky; the moon shows itself again as the queen of night, and lights and cheers the long and dark days of the Scandinavian winter. The time comes at last when the sun disappears entirely from sight; the heavens appear in a blaze of light and glory, and the stars and the moon pale before the aurora borealis.

Scandinavia, often have I wandered over thy snow-clad mountains, hills, and valleys, over thy frozen lakes and rivers, seeming to hear, as the reindeer, swift carriers of the North, flew onward, a voice whispering to me, "Thou hast been in many countries where there is no winter, and where flowers bloom all the year; but hast thou ever seen such glo-

rious nights as these?" And I silently answered, "Never! never!"

This country, embracing nearly sixteen degrees in latitude, is inhabited chiefly by a flaxen-haired and blue-eyed race of men—brave, simple, honest, and good. They are the descendants of the Norsemen and of the Vikings, who in the days of old, when Europe was degraded by the chains of slavery, were the only people that were free, and were governed by the laws they themselves made; and, when emerging from their rock-bound and stormy coast for distant lands, for war or conquest, were the embodiment of courage and daring by land and sea. They have left to this day an indelible impression of their character on the countries they overran, and in which they settled; and England is indebted for the freedom she possesses, and the manly qualities of her people—their roving disposition, their love of the sea, and of conquest in distant lands—to this admixture of Scandinavian blood, which, through hereditary transmission, makes her prominent as descended chiefly from Anglo-Scandinavians and not Anglo-Saxons.

We will now travel from one end of this land to the other, crossing it many times from sea to sea, over well-made roads and wild tracts, in summer and in winter, and linger among its people.

CHAPTER II.

From London to Göteborg.—Native Hospitality.—A Swedish Dinner.—Strange Dishes.—Railway Travel in Sweden—A model Dining-room.—Picturesque Scenery.

In the latter part of May, 1871, I sailed from New York for England; and early in the beginning of June, at three o'clock in the morning, I drove from my London hotel, and went on board the weekly steamer bound for Sweden. After one of those long drives which give to the stranger an idea of the vast size of that marvellous city, I found myself by the Millwall Docks, and just in time to jump on board the boat, which was passing through one of the locks. The weather was thick and foggy, and we steamed slowly and carefully down the Thames. The river, as usual, was crowded with vessels of all nations, coming from and going to every part of the world. Our destination was Göteborg, in Sweden. There were few passengers, and all except myself were Swedes.

The fog increased, and at night became so dense that there was danger of running into some of the fishing-smacks, great numbers of which were in our course. The Swedish captain was very courteous, and spoke English perfectly. I never heard him utter an oath; before partaking of his meals he used to bow his head and silently ask a blessing—a custom which I found almost universal in Scandinavia.

This part of the passage was not so quick as we expected, on account of the fog, and, moreover, the vessel was very slow. On Sunday morning, about ten o'clock, the sky suddenly cleared, and the weather remained fine to the end of our voyage. In the afternoon we saw the coast of Jutland, which was low, and appeared bleak and sandy; in the evening we passed the Skau light-house, situated near the extreme northern part of Denmark, and witnessed a most beautiful sunset—the deep yellow glow which followed the disappearance of the sun re-

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minding me somewhat of the zodiacal light at the equator; at ten o'clock the twilight was so strong that we could see only Jupiter and three stars.

Early on Monday morning we came in sight of the barren, granite-bound coast. Soon afterwards our steamer ascended the Göta-elf (river), and at five o'clock we were along-side one of the quays of Göteborg, after a voyage of three days. Our baggage having been examined by the custom-house officers, I found quarters at the Hotel Götha Källare, the best in the place, but inferior to many hotels of less pretension in smaller Swedish towns. Göteborg, called by the English Gothenburg, is the second city of Sweden, and is its principal seaport. It has a population of seventy-six thousand, and is situated on the western coast, in 57° 42′ N. I was impressed at once with the cleanliness of the place; its canals, passing through the middle of the streets, reminded one of some Dutch towns, but the architecture of the houses was decidedly French, the people living chiefly in apartments, while the villas were of the English style.

I had obtained letters of introduction from Herr Stenersen, the minister of Sweden and Norway at Washington, and, while passing through London, had received others from the former consul in New York, and from other friends. Among the letters was one addressed to a leading firm in Göteborg; the senior partner, Herr W——, was a member of the First Chamber of the Diet. I was struck by their amiability and refinement, and by the quiet and unpretending manner in which they sought to help me. The softness of their pronunciation modified the excellent English they spoke; and they gave me "Welcome to Sweden! welcome to Scandinavia!"

There are three ways of going from Göteborg to Stockholm —by railway, which takes twelve hours, by water, from sea to sea, or by post stations. If the traveller can command the time, the steam canal and lake route is preferable. It requires two or three days, but affords an excellent opportunity to see the country without being wearied; and most of the steamers are very comfortable.

"But you must take dinner with me," said the eldest broth-

er of the house; "for you cannot go before to-morrow morning; we have only one train a day to Stockholm." Thus, at my entrance upon Scandinavian territory, I was made acquainted with the hospitality of its people.

We dined at 3 P.M., and I found, but too late, that it was proper to wear a dress-coat and a white cravat, even when dinner is served so early in the day, and that in this respect the Swedes are very particular. I had the honor of escorting the hostess to the dining-room. Dinner in Sweden is invariably preceded by a *smörgås*, a series of strange dishes eaten as a relish.

I was led to a little table, called *smörgåsbord*, around which we all clustered, and upon which I saw a display of smoked reindeer meat, cut into small thin slices; smoked salmon with poached eggs; fresh, raw, sliced salmon, called *graflax*, upon which salt had been put about an hour before; hard-boiled eggs; caviare; fried sausage; a sort of anchovy, caught on the western coast; raw salted Norwegian herring, exceedingly fat, cut into small pieces; *sillsallat*, made of pickled herring, small pieces of boiled meat, potatoes, eggs, red beets and raw onions, and seasoned with pepper, vinegar, and olive-oil; smoked goose-breast; cucumbers; soft brown and white bread, cut into small slices; *knäckebröd*, a sort of flat, hard bread, made of coarse rye flour, and flavored with aniseseed; *siktadt* bread, very thin, and made of the finest bolted flour; butter; *gammal ost*, the strongest old cheese one can taste, and *kummin ost*, a cheese seasoned with caraway; three crystal decanters, containing different kinds of *bränvin* (spirits); *renadt*, made from rye or potatoes; *pomerans*, made from renadt, with the addition of oil of bitter orange, and somewhat sweet; and *finkelbränvin*, or unpurified spirit. Around the decanters were ranged tiny glasses, and the gentlemen of the party drank one or the other of these potations as an appetizer; the dishes and the spirits were alike strange to me. Everything was tastefully arranged upon a snowy cloth—the plates, knives, forks, and napkins being placed as at a collation; but when, as the guest, I was invited to help myself first, I was at a loss how to begin; the meal was eaten standing. Observing my predica-

ment, the hostess came kindly to my rescue, and helped herself first—taking a piece of bread and spreading butter upon it, and then selecting tidbits with a fork. I kept up a conversation with the host, but observed the proceedings warily all the time, in order to know what to do next; knives and forks were used in common. I began with bread, butter, and reindeer meat, which were good; and seeing that every one was enjoying the graflax, I resolved to try it; but the slice was hardly in my mouth before I wished I had not made the experiment. It was too late; I had to eat it; there was no possibility of escape. My stomach was ready to give way; but the only thing to be done was to swallow what I had taken; a small glass of renadt, drank immediately afterwards, saved me. I did not repeat the experiment of eating graflax that day, nor for many days thereafter. The smoked salmon was an improvement upon the graflax, but that was bad enough; the sillsallat, which is considered a great delicacy when the herrings are fat, I found to be palatable; and sundry other dishes I liked very much, the smoked goose-breast being particularly delicate; but I shall never forget my first impressions of the raw salmon. Afterwards I became very fond of sillsallat, and, in fact, of everything that was put upon a smörgåsbord, with the exception of graflax, which I can now eat, but have serious doubts whether I shall ever be able to enjoy. The Swedes regard it as a great delicacy; and as the first salmon caught in the spring are dear, the graflax is considered a luxury.

The smörgås, however, was only a preliminary to the dinner —an appetizer. We went to a large table close by, and took seats, the place of honor on the right being assigned to me. The dinner and the wines were like those of any other country. At the beginning of the meal the host welcomes his guest with a glass of wine, then bows to the hostess and to him, and during the repast, host, hostess, and guests, glass in hand, bow also to each other, and sip their wine. It is customary for each gentleman to escort back to the drawing-room the lady he takes to dinner; then follows the charming and invariable custom when every guest shakes hands with the hostess, say-

ing, *Tack för maten* (thanks for the meal, or, literally, thanks for the food), to which she answers, *Välbekommet* (welcome to it). The same ceremony is repeated in honor of the host and the rest of the family; and then the children follow, with the same form of thanks addressed to their parents, thus being taught from their youth to be grateful to those who support them. A general interchange of civilities ensues, often accompanied by hand-shaking and the bowing of the guests to each other, and a considerable interval of time is occupied by conversation before coffee is served. I was, indeed, at a loss to know the meaning of this hand-shaking, and accordingly neither gave thanks nor shook hands. So I had made two blunders on my first day: I had appeared at dinner without an evening suit, and had not expressed my thanks for the hospitality I had enjoyed.

The weather being delightful, a promenade was proposed. "You must see our little park," said the host and hostess; and I found that their praise of that beautiful pleasure-ground was not extravagant. This was the favorite summer resort of the inhabitants of Göteborg. It was tastefully laid out, with paths winding through shrubbery and along the banks of a little river, and with flowers springing up everywhere in profusion; a small fee was charged for admission, and carriages were excluded. The spring was said to be a week or ten days behindhand; but the hawthorn was beginning to bloom, the lilacs and the apple and horse-chestnut trees were in full blossom; the poplars, elms, and lime-trees were flourishing; the oaks had just put out their young leaves; the grass was green, and the whole scene a lovely picture. Under a central pavilion a band of good musicians were playing; flocks of tame sparrows were twittering around; beneath the shadow of the trees hundreds of visitors were strolling, lounging, or conversing, taking refreshments at the little tables provided for the purpose, or exchanging the gentle courtesies characteristic of this people.

So passed the first day of my visit to Scandinavia. The charming family who had received me as their guest exacted a promise of another visit on my return to their city.

The railway from Göteborg to Stockholm was built by, and is under the management of, the Government; it is the main road from west to east, connects with the north and south and other points of Sweden, and also with Christiania: this and the grand trunk railway from the south are the two finest roads in Scandinavia.

At six o'clock the next morning (June 13th), I was on my way to Stockholm—the distance being 42.6 Swedish miles. The cars were similar to those in use in all the countries of Europe; only seventy pounds of luggage were allowed to each passenger, and the charges on the amount in excess of this limit were very high. I was not permitted to take my gun with me, this being against the regulations, and it had to go with my luggage. After leaving Göteborg, the scenery at times reminded me of that of New England. The country was barren and rocky in many places, and some of the fields were surrounded by stone walls, precisely like those commonly built in America; others were fenced with split wood. Little lakes, woods, swamps, cultivated fields, and some magnificent oak-trees, were passed in succession; the farm-houses were painted red. As we travelled farther inland, the vegetation seemed more backward, and the scenery became peculiarly Swedish—low, bleak barrens and polished granite hills showing the action of glaciers; forests, chiefly of fir, pine, and birch, alternating with arable tracts, marshes, and long stretches of moorland; with here and there patches of sandy soil covered with boulders or stunted trees.

Great care had evidently been bestowed upon the construction of the road, the bed of which had been solidly made, under the supervision of Government officers, with the best material. Economy was consulted in the management of details; waste iron was gathered into heaps along the line, every piece being preserved for remelting; even the oiling of the engines and the car-wheels was so performed as to prevent loss by dripping. The stations were kept in perfect order, the name of each being displayed upon its front in large characters, with its distance from Stockholm and from Göteborg; nearly all were surrounded by flower-gardens, and the conven-

iences for the use of travellers were admirably arranged. The railway officers were studiously polite, and uniforms were invariably worn by station-masters, conductors, porters, and other *employés*. At intervals of about three miles, little red houses had been erected for the use of the watchmen who guarded the road; these were numbered consecutively, and the business of each man was to walk half-way up and down the track, to see if everything was in perfect order; at every cross-road a watchman was also stationed, the Government regulations requiring the companies to adopt every precaution to insure safety.

In the afternoon we stopped at a station called Katrineholm, one of the best dining-places on any railway in Sweden. Hearing the cry, "Twenty minutes for dinner," I rushed from the train and hurried to the *matsal* (dining-room), for the bracing air had given me an appetite. Remembering railroad experiences in America, I thought it not improbable that the stipulated limit of twenty minutes meant ten; hence my haste. But when I entered the hall, I felt ashamed of myself for having elbowed my fellow-travellers as I had done; everything was quiet, orderly, and clean, and I stopped to survey the spectacle, impressed by its novelty. In the centre of a spacious room, the floor of which was spotless, was a large table, covered with a snowy cloth, upon which was displayed a variety of tempting dishes, including large fish from the lakes, roast beef, lamb, chicken, soup, potatoes and other fresh vegetables; different kinds of bread; puddings, jellies, sweet milk, cream, butter, cheese, and the never-failing buttermilk, which many ate first, and before the soup. Every article of food was cooked to a turn, and the joints were hot, having just been taken off the fire. Piles of warm plates, with knives, forks, and napkins, lay ready to the traveller's hand; and the whole aspect of the place was tidy, cheerful, and appetizing; one might have fancied a banquet had been spread for the entertainment of a private party. The purveyors had been apprised by telegraph of the exact time of our arrival; and, as the railway trains are punctual, unless delayed by sudden snowstorms or accidents, all was in readiness for us. I was much

interested in observing the manners of the travellers; there was no confusion; the company walked around the central table, selected from the dishes they liked best, and then, taking knives, forks, spoons, and napkins, seated themselves at the little marble tables scattered in the room, rising when they desired to help themselves again. I noticed particularly the moderation of the people: the portion of food each one took was not in excess of that which would have been served at a private table; and every person in the company seemed to remember that his neighbor also might fancy the dish of which he partook. The sale of ardent spirits in the railway stations being forbidden by the Government, only beer or light wines could be procured, and these were served by alert and tidy young girls. From a large coffee-urn placed upon a table, the travellers helped themselves to that beverage; milk was provided without charge.

The dinner concluded, and the given period of twenty minutes having expired, we stepped up to a desk to pay the reckoning, which was received by the girls; the price charged for this excellent meal, including coffee, was one rix-dollar and twenty-five öre*—now it costs one rix-dollar and fifty öre: an additional sum of twenty-five öre was charged for the bottled beer. I observed that the word of each guest was taken without question as to the quantity of wine, beer, or coffee he had consumed, and no one was at the door to watch the people going out. Leaving the dining-room, I was more than ever impressed with the unfailing courtesy of the people.

The scenery had become more and more beautiful, even before reaching Katrineholm, the railway skirting a picturesque narrow lake, well wooded with pine, fir, birch, and oak: some of the oak-trees, with their spreading branches, were striking features of the landscape. As we approached Sparholm, the scene grew finer—rich fields, groves, forests, lakes, and rivers passed before us in quick succession, forming a charming panorama. At six o'clock we reached Stockholm, and soon after

* The rix-dollar is now called krona, divided in 100 öre, and is equivalent to 26 cents.

my arrival I was comfortably settled on Gustaf Adolf Square, at the Hotel Rydberg, where from my windows I had a commanding view of the royal palace and of the most lively part of the capital.

The next morning, surprised at seeing the servant lay a bill upon my table, I drew the natural inference that I was expected to pay by the day, and accordingly tendered him the amount necessary to meet the obligation; but, with much politeness and apology, he declined to receive the money, explaining that it was the custom to present each guest with his bill daily, with a memorandum of the amount due on the previous day—the purpose being to provide for the immediate correction of mistakes. This custom might be copied with advantage by hotel-keepers in other parts of Europe. It is an honest habit, and served still further to strengthen the good opinion I had formed of the people.

My first call was at the American Embassy, where I was warmly welcomed by the minister resident, General C. C. Andrews, of Minnesota. No one has ever represented the United States with more credit abroad. During his seven years of residence in the country he won the respect of the inhabitants, and few foreign representatives have left behind them so many friends and pleasant recollections. Like myself, he is a great admirer of the Scandinavian people.

CHAPTER III.

Stockholm.—First Impression.—Great Politeness.—Sociability of the People.—Outdoor Life.—Charming Ladies.—Long Twilights.—Parks.—Beautiful Suburbs.—Sunday.—A Seat of Learning.—Free Institutions.—Schools.

A DELIGHTFUL impression is made upon the stranger, who, on a bright June day, enters the picturesque and charming city of Stockholm. Built partly upon eight islands, connected by bridges, in the short river which forms the outlet of Lake Mälar, it possesses romantic features unlike those of any other capital.

The massive palace, the open squares, the museums, gardens, libraries, scientific institutions, schools, churches, statues, and bridges; its splendid quays, which form the finest feature of the city, and at which vessels are continually loading and unloading; the numerous miniature steamboats, which fill the office of omnibuses, carrying passengers to and fro, either from one island to another or to the main-land; and the abundant evidences of good government and prosperity, all combine to make it one of the most attractive of European cities.

The lake is about seventy-five miles long, and studded with islands, over fourteen hundred in number, and its deep and indented shores are lined with towns, villages, hamlets, churches, ruins, chateaux, old castles, modern villas, farms, and meadows, alternating with huge masses of rock, wild and silent forests, and limpid rivers; while its waters are ploughed by steamers and sailing-vessels on their way to or from the sea. The Baltic winds its way through a clustering archipelago and a charming fjord marked by the characteristic features of Swedish scenery. The city covers a great deal of ground, on account of its squares, parks, wide quays, and water, the latter running swiftly between the islands. Many of the

streets are narrow, without sidewalks, paved with cobble-stones, and badly drained, with gutters in the middle or at the sides in place of sewers; yet the town is clean. Most of the houses are high and stuccoed, not unlike those of old Paris; but some quarters are adorned by handsome residences. The sidewalks are so narrow, even in some of the leading thoroughfares, that the custom is to take the left, and if by chance on the wrong side of the street, to yield the right of way. The oldest quarter is built on the island of Stadsholmen,* where the royal palace towers far above the surrounding houses. This is an extensive and noble structure, containing a large library, many objects of curiosity, and a fine picture-gallery; but in its neighborhood are found some of the ugliest and narrowest streets of Stockholm: there are very few handsome private city residences. The people rarely spend more than from a sixth to a tenth of their income for rent, and only a small number occupy houses of their own; the majority live in apartments, as on the Continent, and only in the better houses is a *concierge* employed. As there are no names on the front-door to indicate the flat where the people reside, the stranger is often puzzled in the attempt to find the person upon whom he desires to call. The opera-house has a very fine orchestra that would do credit to London or Paris, Berlin or Vienna. The several theatres and other places of amusement are sometimes closed in summer. There are also several summer-gardens or parks; and to stroll in them, listening to the music and looking at the crowd, is an unfailing source of pleasure.

Kungsträdgården is a very fine square, with large trees, and many varieties of flowers, and adorned by a beautiful fountain and bronze statues of Charles XII. and XIII. Berzelius Park is a charming spot, having a life-size statue of the great chemist in whose honor it is named. Strömparterren, ornamented with flowers and trees, is delightfully situated at the foot of the Norrbro Bridge, the stream running swiftly on either side.

* The eight islands upon which the city is built are called Kungsholmen, Riddarholmen, Helgeandsholmen, Stadsholmen, Skeppsholmen, Kastellholmen, Strömsborg, and Djurgården.

No stranger should fail to visit the hill called Mosebacke, the summit of which commands the finest view of the city and its surroundings.

There are several large hotels, with well furnished and comfortable rooms, and their charges are moderate. The most modern, the Grand Hotel, is not situated so pleasantly as the Rydberg, but is the only one that had an elevator and baths. Private houses rarely contain bath-rooms, and, as in most cities of Europe, people have to go to the public establishments for their ablutions, and the old-fashioned way of carrying water up was prevalent till lately.

As the stranger wanders through the streets, he notices numerous signs, upon which are written, "Rum för resande," which excites the astonishment of an American or Englishman unacquainted with the language, who take these places to be rum shops; but they only announce "Rooms for travellers." The Swedes who come to the city on economical principles generally lodge in them.

The contrast of the business communities of Göteborg and Stockholm is very striking; in the former the merchants attend strictly to their affairs during office hours, but in the latter the shopkeepers are often not found at their establishment during these hours; and many of them pass much time daily at the cafés.

Numbers of stores are kept by women, who manage their business exceedingly well, and are examples of thrift, supporting themselves and their families; in other cases the wives and daughters are helpmates to their husbands or fathers: in a word, unless wealthy, every member of a family helps in its support.

I was surprised at the neatness of the apartments of the humbler class of shopkeepers and other people; all tried to keep up appearances, and generally had some refreshment to offer, in the shape of a cup of coffee or glass of wine, to friends and visitors.

In Swedish or Norwegian, Herr corresponds to our word Sir, or Mr.; Fru, to Mrs., Madam, wife.

Young ladies of education are addressed as Fröken; formerly the term was applied only to daughters of noblemen.

There are three titles of nobility in Sweden: Grefve, earl, being the highest; Grefvinna, countess; Friherre, baron; Friherrinna, baroness — the words baron and baroness are also used. The last grade of nobility has no title, and is addressed as Välborne Herr, or Fru.

In writing to an earl or countess, one should address — Högvälborne Herr, or Högvälborna Fru, with the name following: high—well-born, Herr Grefve, or Fru Grefvinna; and the same to the Friherre or Friherrinna.

To other persons the title should always be prefixed, as Herr Doctor, Herr Professor, or that of any other civil or military grade. All the sons, as everywhere on the Continent, inherit the title of nobility of their father; and if the daughters of noblemen marry untitled gentlemen, they may add the title of their father to the name they assume. Strange to say, the word Mamsell, a corruption of the French Mademoiselle, and Madame, are used in addressing the people of the humbler class of society.

Jungfru is spoken to farmers' daughters and servant-girls. Flicka is the general word for girl; tjenst flicka, servant-maid; dräng, man-servant.

People of education address each other in the interrogative form, as, Will Herr A—— go with us? Does not Herr B—— think that it is very stormy?

The personal form ni (you) is now getting more used.

Du (thou) is used among friends. When two gentlemen wish to use this term towards each other, they say, Skola vi lägga bort titlarna? (Shall we lay by our titles?) They stand with a glass of wine and say, "Skål brother," and empty the glass to the bottom, after which they say "thanks."

There is a tone among the ladies of Stockholm and Sweden which is perfectly charming. Not only are young ladies of title and wealth thoroughly educated, but they are also taught to cultivate simplicity of manner and dress, which is shown by them in after-life, and which gives them a most agreeable air of modesty and refinement. They wear but little jewellery, no matter what their station may be, and that of the simplest kind. Silk dresses are very seldom worn by

them, and even then generally not before they come out in society.

The wearing of decorations is a little piece of vanity which is a prominent weakness among the Swedes, and, in fact, among all the nations in Europe except England. Military men are exceedingly fond of wearing their uniforms on all occasions. To an Englishman or an American, the first impression is that the country is under a despotic government; that the civil is, if not in name, in fact subordinate to the military power; fortunately the land is not groaning under such a curse. Freedom of speech and of the press are untrammelled; the repeal or modification of any laws can be freely discussed, and they are so framed that the liberties of a citizen cannot be at the mercy of the king or any arbitrary power; there is no secret police except that required for malefactors. There is no freer people in Europe than the Scandinavians; no passports are required from any one, either coming to or going from the country.

The better class of people of the cities were in mourning, as a mark of respect to the deceased queen. This dress for ladies was black, with white collar and cuffs, and white ruche in front; a white apron or short skirt is also worn, and the gloves must be black. Almost every gentleman had a black band on his hat, and black gloves and necktie; and many were in full mourning costume.

One of the most striking of the peculiarities of the city is the air of cheerfulness and contentment which marks the manners of its people. In the streets, acquaintances are continually saluting each other—gentlemen taking off their hats and making most graceful bows, their heads remaining uncovered while talking even to the humblest women.

Extreme politeness and amiability are national characteristics, and belong equally to all classes — the poor saluting the rich, and the rich the poor. Refinement of manner is seen even in the servant-maids: these are treated with consideration, and there exists a friendly feeling between them and their masters.

I was surprised, while meeting ladies of my acquaintance,

not to receive the courtesy of recognition from them; but I learned that it was the invariable custom for a gentleman to bow first, and I had been apparently rude without being aware of it.

The Swedes are very strict in the observance of etiquette; the calls of a stranger are invariably returned the following day. As a nation they are the most polite people in Europe; they are not very demonstrative, but will often go a great deal out of their way to render a stranger a service.

The sociability of all classes is characteristic. Whole families and parties of friends are seen dining together at the restaurants in the suburbs of the city, or groups of pleasure-seekers amusing themselves in the parks. Merchants invite their acquaintances to spend the day at their picturesque and unpretending villas, which overlook the waters of the lake or fjord; and these are often the scene of simple and unostentatious merriment.

When a large company is invited to a dinner, the guests eat, either standing, or with their particular friends seat themselves at little tables in a cosy corner in some of the parlors, or on the piazzas. The hostess and her daughters do the honors with charming grace and simplicity, serving one, or urging another to come to the table, or to take something more. There is generally a little speech-making—the health of one or more of the company being proposed by the host. These dinners have the advantage of being comparatively informal.

It is the custom, at the end of a repast, for the honored guest, or for the person who stands highest in the social scale, to bow and propose the health of the host and hostess in a few words.

There is hardly any Swede, who has any claim to education, that does not speak at least one, and generally two foreign languages; and, if with time he has forgotten to speak them fluently, he can usually read and often write them. After the Russians, they are the best linguists in Europe.

Though the official correspondence is in French, and more persons in the higher circles speak that language better then

others, I noticed that, among the rising generation, German and English were more studied.

Summer is the best season to visit the city. The month of June—especially the last two weeks—is the pleasantest time of the year, as many of the people have not yet gone into the country, and the inhabitants then make the most of the fine weather. Rich and poor pass their leisure hours in the open air, and in the afternoons and evenings the pleasure-gardens and parks are thronged; good bands of music play; and, while the strolling citizen or stranger listens, he may sit at little tables, where beer, coffee, soda-water, Swedish punch, and other refreshments are served. Whole families—father, mother, children, uncles, aunts, cousins, or friends—spend many of their evenings there. Every one is neatly dressed; there is no roughness, and no vulgarity.

The breaking of the long winter opens the ice-blockade to the North; and at first the docks are lively with the loading and unloading of vessels bound for the ports of the Baltic, the Gulf of Bothnia, St. Petersburg, Norway, Germany, England, and France. The navigation of the canals and lakes is resumed on the return of warm weather, and steamers leave daily for the towns on the southern and northern coasts, giving the tourist opportunity to go whither he likes.

The longest days in the south of Sweden have then come. The sun rises in Stockholm, from the 17th to the 21st of June, at 2.45 A.M., and sets on the first day at 9.16 P.M., and on the others at 9.17. For a number of days there is no darkness, and twilight for only about three hours. Then the days shorten one minute in the morning and one in the evening, till the end of July, on the last day of which the sun rises at 3.44, and sets at 8.27. In August the days shorten more rapidly, and on the 31st the sun rises at 4.55 and sets at 7.4; on the 30th of September it rises at 6.3, and sets at 5.35.

The absence of night seems at first very strange. The quays where steamers lie are alive with business; vessels are loading and unloading; a large number of stevedores are putting the cargo on board of the boats. At 1 A.M. there is a sensible diminution in the number of promenaders on the streets;

and by two o'clock only a few stragglers are to be seen. All the inhabitants are then fast asleep; the window-blinds are closed, and the shades and curtains carefully drawn down in order to exclude the light; the town is silent. Now and then one can hear the voice of the watchmen from the churches crying the hour of the night—an old custom still prevalent; policemen can be seen walking to and fro on their beats; and the footsteps of a few soldiers going to relieve guard, resound strangely through the streets. On the quays, the custom-house officers are watching to see that no one defrauds the revenue, and there alone are signs of life visible the whole of the night.

The city has a population of 174,000, is in latitude 59° 21′, and lies opposite the long, broad, fjord-like arm of the Baltic called Finskaviken (Finn Bay), which leads to St. Petersburg; and although situated thirty-five miles farther south than the capital of Russia, its climate is three or four degrees cooler in summer, and in winter six or eight degrees warmer. This difference is caused in summer by the winds blowing over the Baltic and Lake Mälar, and in winter by the exposure of St. Petersburg to the cold blasts from the land. It is very seldom that the thermometer in Stockholm rises above 88°, or in the coldest weather falls to 25° below zero. The warmest months are July and August, the average temperature varying from 62° to 66°. The mean temperature of the year averages from 41° to 43°.

The suburbs of the city constitute its great charm. Days may be spent in exploring the neighborhood by water and by land, the landscape being thoroughly Swedish and sylvan in character; on the shores of the fjords, bays, and islands are seen rocks alternating with clusters of oak, linden, elm, ash, poplar, alder, birch, fir, pine, and other trees, and every little spot of open land under cultivation. Small but fast iron steamers plough their way in every direction, taking people to or from their homes, or landing the pleasure-seekers or lovers of nature at some favorite spot of their selection.

The most beautiful of the parks is the Djurgården (Deer Park); there is nothing equal to it in Europe. It occupies an

island about eighteen miles in circumference, and is adorned with villas, romantic drives, lovely walks, paths through glades, forests of magnificent trees, lakes, and masses of rock: some of the ancient oaks are superb. There are places of amusement, cafés, and restaurants, the most popular place of resort being Hasselbacken, where great crowds dine every day. The park is easy of access from the city by small steamboats, which run at short intervals from Norrbro and other points, or by a short drive over a bridge, which lands you on its shores in a few minutes.

In this park is the small, charming, but unpretending palace of Rosendal, then the residence of the queen-dowager. This most delightful retreat is almost hidden from view by trees. Before this mansion stands a magnificent porphyry vase, made at the manufactory of Elfdal, in Dalecarlia. There are several other parks and palaces in the suburbs of the city.

Carlberg Park, with its grand linden, elm, and oak trees, is a favorite summer resort. The palace has been transformed into a military school.

Others are Marieberg, on the island of Kungsholmen, which has a high-school of artillery; Bellevy, almost opposite Haga, with magnificent trees; the palace of the Ulriksdal, and its fine park. Drottningholm is the most imposing palace near the city, and is situated on the Lofön, one of the islands in the Mälar. Svartsjö, Rosersberg, Rydboholm, and a sail down the fjord, and on the Mälar, should not be missed.

What surprises the stranger is that at all the royal residences there are no fences or walls, soldiers or policemen. No one ever thinks of plucking the flowers; visitors walk in the grounds to the very doors and under the windows, even when the members of the royal family are at home—they are evidently not afraid of being shot at; and if the family be absent, the public can visit any of the palaces, by simply asking one of the servants. There is so much freedom, and so few attendants, that the plain and honest people, who do not understand etiquette, often make mistakes, and, entering the palaces, are surprised to find themselves face to face with royalty.

Villas and summer-residences are seen in every nook and

corner of the rocky shores. The houses, with very few exceptions, are of wood, and kept carefully painted, surrounded often by beds of bright flowers. Every such home has a landing-place, on which steamers can leave or take passengers, also a bathing and frequently a boat-house.

The only way of communication with many of these country places is by water. Little steamers have each their particular route, and go daily to and from the city, stopping at the different country-seats on their way. It was a source of never-failing pleasure, at my different visits to Stockholm, to make excursions on these boats. At every landing wives and children came to meet their husbands and fathers, and friends to greet friends, all appearing cheerful and happy, and welcoming each other as they returned from the city. Here was the mistress with her maid, returning from the market in Stockholm, with an enormous basket filled with provisions to last a week.

The land along the roads is under a high state of cultivation, and now and then you see a tobacco-field.

Sunday in Stockholm is observed by closing the stores and suspending business, and during church-time no places of refreshment are open; but, as among other Protestant nations on the Continent of Europe, it is a day of recreation, when the toiler rests. After the morning service in the churches, the libraries and museums are thronged by the industrial classes, who have no other day for rest or intellectual improvement. The parks are crowded with the families of artisans and tradesmen—fathers and mothers taking part in the gambols of their children, and enjoying the summer days. These people are mostly of the working-class, or shopkeepers, who have no country-seats in which to spend their leisure hours, no watering-places to go to, nor money for luxuries, and who are glad when Sunday afternoon comes. After church in the morning, they go with their wives and children to breathe the pure and bracing air, which gives them new life before they return to the close factory rooms where they are employed for six days of the week. The refining influence of parks in every city has not, I think, been sufficiently appreciated; they do a great deal of good; many a man, instead of idling away

the hours in drinking, would gladly go with his family to enjoy such innocent pleasure.

It is the height of selfishness for men who live in the country, or enjoy the comforts of life in the cities, or can absent themselves when they please for a holiday, to find fault with the working population because they go out on a Sunday to strengthen their body or improve their mind. I would like very much to put those who oppose such movements in the place of these poor people, and see how they would like a sojourn in a crowded and warm room in a tenement house, upon the walls of which the warm July sun shines all day.

The city is the centre of several large private and corporate banking establishments. The most important is the Riksbanken, under the control of the Diet; then the Stockholm's Enskilda Bank—the latter founded in 1859. The managing director, Herr W——, to whom I am indebted for many acts of kindness, and whose friendship I appreciate highly, is acknowledged to be one of the ablest financiers of the country. He represents Stockholm in the Diet, as a member of the first chamber. His life has been as remarkable as that of any man in the New World. The son of a Lutheran bishop, as a boy he went before the mast, and sailed three years under the American flag. When a very young man, he had bought in New York Harper's "Family Library," which he keeps carefully, and showed me with great pride at one of his entertainments, remarking that he had bought it out of his hard savings. He is very much interested in American affairs, and in politics places himself among the Liberals and Reform Party. He was among the first, if not the first, in the three Scandinavian kingdoms who drew the public attention to the necessity of going over to a gold standard. As early as 1853, he tried also to further the adoption of the metric system of weights and measures. He also inaugurated the employment of females in a bank over which he is a director; and several ladies hold very responsible positions; he thought that the field of occupation for women ought to be extended, and said that in many cases, by their education, they were not so subject to temptation as men.

The capital of Sweden is not only a city of pleasure and commerce, but also a great seat of learning and science. The museums, hospitals, scientific institutions, numerous schools, and the general spread of education have attracted to it a highly intellectual, refined, and delightful society, which contributes to make the city one of the pleasantest in Europe. Professors, doctors, rich merchants, persons engaged in every branch of art, science, and literature, men of leisure, and high officials, unite in themselves the finest qualities of the people, and are always ready to serve those who are drawn to the capital.

The Academy of Sciences is a large building of no architectural pretensions, but possesses a very fine library and an extensive collection, the mineralogical and geological part of which ranks among the finest in Europe, while the botanical and zoölogical specimens are also very valuable. Among the rare curiosities are numbers of aërolites of all sizes, one of which is the largest yet found; it was discovered by Professor Nordenskiöld, whose explorations in the North have been so valuable to science, and weighs over forty-nine thousand pounds. In one of the rooms, where the regular meetings of the academy take place, now often presided over by the king, there are hung upon the walls the portraits of former academicians, some of whom have left imperishable names in the annals of science; among them are those of Linnæus and Berzelius. The Carolin Institute has a library, chemical laboratory, and valuable collections; the Technological Institute is another public building, which no stranger should fail to visit. The Landtbruks Akademien (Agricultural Academy) is an institution having a farm, where experiments in agriculture are made. The Seminarium, a college in which ladies are instructed in the higher branches of knowledge, is a splendid nursery from which to recruit the ranks of public and private teachers; the professors of the Academy of Sciences deliver regular courses of lectures in this institution and other schools; the Observatory, the schools, and the hospital are also worthy of careful inspection. The National Museum, a very fine building, contains a gallery of good paintings and statuary,

and a valuable collection of coins, mostly found in Sweden, some of which are very rare; also gold and other ornaments of great antiquity, and implements belonging to the stone, bronze, and iron ages. A very interesting part of the exhibition is the historical collection of old garments: there is a shirt which the great Gustavus Adolphus wore at the battle of Lutzen, the dark spots showing where the blood of the hero stained the garment; also, the costume of Charles XII. and his felt hat, with a hole made by the bullet that killed him while all alone in the trenches making military observations before Fredrikshald; and the domino worn by Gustavus III. when he was murdered; besides an interesting array of shields, helmets, and other warlike paraphernalia, each of which has its history.

There are numerous churches, but none of them have any architectural pretension. The most interesting is the Riddarholmen church, with an iron spire over three hundred feet in height. This church is dear to the Swedes, and is used only as a mausoleum: within its walls are buried some of Sweden's greatest heroes; here is the tomb of Gustavus Adolphus, the hero of the Thirty-years' War, the champion of Protestantism. With what profound respect I stood before that tomb! Upon his sarcophagus are written the words "*Moriens triumphavit;*" by his side lie the remains of his queen, Maria Eleonora. This church also contains the tombs of Charles X. and Charles XI., and their consorts; of Charles XII.; and of several heroes of the above-named war. The floor is covered with slabs, under which lie the remains of many great men, whose names are world-wide, and have shed glory on Swedish history. The Riddarhus is interesting only on account of its historical association; it was formerly the house where the nobles held their sessions as one of the four bodies constituting the Diet; it is adorned with a large number of shields, bearing the arms of Swedish nobles, many families of whom are now extinct.

At the opening or closing of the Swedish Diet the stranger will see in the audience all classes of people represented, from the simple servant-girl, with her handkerchief over her head,

to the high-born and rich of the land. The king generally, unless prevented by sickness, opens and closes the Diet in person. This is done with much formality, accompanied by a mummery of olden time which makes the Swedes laugh. The sovereign is surrounded by the knights of the Order of Seraphim, founded long ago, dressed in what appeared to me most grotesque costumes.

The public schools are numerous, and education is compulsory. The number of children in Stockholm of school age (from seven to fourteen years), according to the census of 1870, was 16,843.

Number attending school every day	12,849
Attending other schools	2,313
In business or work of some sort	970
Disabled by disease	116
Not at school	595

Of the whole number of 15,162 actual scholars, 5194 paid for their schooling, 2313 paid for part of it only, and 7655 paid nothing — this last class attending the people's school (*folkskolan*); and the city paid for education 185,795.38 kronor, or 24.26 öre for each child. There were 208 male and female teachers, with an average of 38.8 children to each; the average age of the scholars was 10 years. Of the 7655 free pupils on the roll, 99.9 per cent. were instructed in Christianity, the Swedish language, arithmetic, and writing; 62.6 per cent. were taught, besides, history and geography; 57.6 per cent., natural history; 52.7 per cent., drawing; 9 per cent., geometry; 56 per cent., singing and gymnastics. Among the girls, 2180 were instructed in sewing, etc. The absentees from school at one time or another were only 9.6 per cent.: with sufficient reason, 3.2 per cent.; without reason, ½ of 1 per cent.; on account of illness, 4 per cent.; for poverty, 1 per cent. So, during the year, those who had missed school at one time amounted to only 721 children. This speaks well for the people, and for the enforcement of the school-laws.

There is another class of schools, called *Högre Elementarläroverk* (High Elementary), in which the dead and foreign

languages are taught, together with the advanced branches of science, and in which students are also prepared, if they desire, to enter the universities. A small sum is paid by them for instruction; but if one be unable to pay, he is instructed gratuitously. Numerous gymnasium halls are attached to these schools for exercise.

The Slöjdskolan is an industrial free school, in which the students are instructed in the practical branches of mathematics; geometrical construction; ornamental, spherical, linear; and free-hand drawing; mechanical engineering; general architecture; engraving; modelling; painting; lithography; papier-maché work; the Swedish, French, English, and German languages, and book-keeping; the pupils are chiefly working men and women. This splendid school, which does so much credit to Stockholm, was attended in 1871 by 1765 pupils, 992 of whom were males and 773 females. Besides the evening classes, there are also day classes; but these are only for females, who are each charged a fee of fifty öre per month. They receive special instruction in drawing, painting, modelling in clay and wax, Parian work, lithography, wood and copper engraving, perspective art, calligraphy, japanning, paper-work, book-keeping, arithmetic, geometry, French, English, and German. These classes were attended by 791 pupils, making a grand total of 2556 scholars in this institution. It is a pleasure to walk through its numerous halls, and observe the humble but intelligent men and women, whose energies seem to be bent upon their own improvement. This school is open from the 1st of October to the 1st of May.

One of the most important institutions is the Kongliga Gymnastiska Central Institutet (Royal Gymnastic Central Institute), which ought to be introduced into every country. Its purpose is to develop gymnastics practically, and to educate medical students and instructors in calisthenics for all the schools, and to put under treatment the sick who require physical exercise; the cures effected under this training are often remarkable. Anatomy is also studied, in order to obtain a knowledge of the muscular system. The average number in attendance is about 1500, the majority being school children.

A free Academy of Fine Arts provides instruction in painting, sculpture, architecture, etc. A Royal Academy of Music gives free instruction in music and singing; the number of its students being about 250, of whom one-half are females.

These statistics speak well for Stockholm and its inhabitants, and many of its institutions might be copied with advantage in other countries. No land is nearer its decadence than that which in its pride refuses to accept the improvements and inventions of other countries because they are not its own, or which teaches its people from childhood that they stand foremost, and that the world must follow their lead.

CHAPTER IV.

King Carl XV. of Sweden and Norway.—His friendly Welcome.—Conversation on various Matters.—His Sympathy for the French People.—Opposed to the Death Penalty.—A Visit to the Ulriksdal Palace.—His Majesty's Tastes.—The Haga Park.—A Sunday in Sweden.—Palace of Rosendal.—An Early Visitor.—Photographs.—Death of King Carl.—Regrets for his Loss.—His Resting-place.

FROM Gustaf Adolf Square, looking over Norrbro, one sees the massive royal palace; to the right there is a low, small wing attached to it. The simple and unostentatious taste of Carl XV. had made him choose this comfortable and home-like part of the extensive building for his own abode; the larger rooms of the main building were used only on state occasions.

On my arrival, I wished to see the king, not as a matter of idle curiosity or vanity, but to pay my respects to the head of the State before travelling through the country, and to become acquainted with this popular sovereign. On inquiry, I found that this was no easy matter. The queen-consort having died some time before my arrival, the court was in mourning; the king himself was just recovering from a serious illness, and was not living at that time in Stockholm. Nevertheless, I made a formal application for an audience, and, to my surprise, the next day the following letter, written in French, was received by the American minister:

"The Minister of Foreign Affairs has the pleasure to announce to Monsieur Andrews, Minister Resident of the United States of America, that his Majesty the King will receive Mr. Du Chaillu in a private audience, to-morrow, Saturday, at eleven (11) o'clock in the morning, in the small apartments of his Majesty, in the Palace of Stockholm.

"The Count of Wachtmeister takes this opportunity to present to Mr. Andrews the assurances of his most distinguished consideration.

"Stockholm, June 16th, 1871."

Not only had my request been at once granted, but his majesty paid me the compliment of coming to Stockholm and granting me a private audience. I arrived at the unpretending entrance of the private apartments of the palace three or four minutes before the time appointed for my reception; a sentry was on duty at the door outside, but he did not ask me where I was going. Accompanied by the servant from the hotel, who had come to show me the way, I ascended a flight of stairs, and there saw a sailor, and by him stood two servants dressed in mourning. I asked for the king; they opened a door, and I found myself in an unpretentious library, in the centre of which was a billiard-table; the books were bound simply, and were evidently intended to be used—not merely to be looked at. I had been hardly three minutes in this room, when a gentleman, plainly dressed, walked quickly through, as if in a great hurry, followed by two military officers. He said "Good-morning" to me as he passed by, and disappeared into the next room—the door being shut behind him. So quickly did he salute me, that he gave me no time to return his salutation. The officers returned, and, with a bow, said, "The king is ready to receive Mr. Du Chaillu;" and, opening the door, introduced me to the presence of the sovereign, and, closing it, left me alone with him. Carl XV., of Sweden and Norway, came towards me; I advanced at once, but had hardly time to bow, when he extended his hands and gave me a warm greeting, saying that he was very glad to see me in Sweden. His friendly welcome, his frank and open countenance, and the total absence of formality, drew me, instinctively and sympathetically, towards him, and made me feel at once quite at ease.

The king was tall and slender, and of a dark complexion. Although he bore the marks of sickness in his face, I did not wonder that some years before he had passed for one of the handsomest of living sovereigns.

I thanked his majesty, in behalf of the literary men and travellers of America, for giving me an audience, and added that many among us in the United States knew of him as a poet and an artist, and that we all admired him as a monarch

ROYAL PALACE IN STOCKHOLM.

who ruled over a free country. "Yes," he replied, "we are free, for we have a constitutional government. I am glad to hear that you are to travel in Sweden and Norway, and see us as we are." I answered that I intended to explore the Peninsula of Scandinavia thoroughly, from one end to the other, for several years, and become acquainted with the people. Little then did I know of the many courtesies that were to be extended to me everywhere.

"Let us seat ourselves," said King Carl; and at the same time he pointed to a chair by a small table at one of the windows looking out upon Gustaf Adolf Square. The king took the seat opposite, and, taking a case from his pocket, he offered me a cigar. Learning that I had never smoked in my life, or used tobacco in any form, he said, before lighting a cigar,

"Will the smoke annoy you?"

"Not at all," was my answer.

The king continued, "I am astonished that a traveller like you does not smoke; you do not know how much you miss," sending out at the same time a puff of smoke.

"Ignorance is bliss," said I.

"We know you in Scandinavia," he added. "Several of your works have been translated into Norwegian and Swedish; and you will find that you are not a stranger among us."

"Will your majesty do me the honor of accepting my works in English?"

"With pleasure," he replied; and he added: "Travel well; visit our public schools in Norway and Sweden, our universities, our scientific institutions: we all believe in education. See our railways, our canals; observe everything. You will probably get acquainted with many of our scientific men, who will take great pleasure, I have no doubt, in showing you our collections."

We talked of agriculture. "Before I was a king," said he, "I was a farmer. I was fond of that life, but had to abandon it; I have now no time to spare, for I have much to do." Then he spoke again of the progress Sweden and Norway had made in education. "The uneducated must be partly educated. We have an excellent law; every child must go to school;" and

his eyes beamed with earnestness as he spoke. "I am very glad," I replied, "to see that your majesty is not one who, being educated, believes that others should remain ignorant; that you are not like those who think it is best for the world that there should be one class instructed and another left in entire ignorance, nor like those who are opposed to general education, but are unwilling that their own children should be uneducated."

Then we spoke of telegraphs, of railways, of manufactures. "We must have more railways, more capital, and more people, for we have a large country; and if it were thoroughly improved, we could support a much larger population."

We conversed about Lapland and the north of Sweden. "I have walked a great deal through Lapland," remarked the king; "I love to walk." Then the conversation turned upon hunting, and he incidentally mentioned that he had never worn a morning-gown in his life. Glancing around the cosy room, with low ceiling, filled with an exquisite collection of antiques, armors, and old curiosities, I asked permission to examine them. "Certainly," he replied; he took great interest in showing them, and explained the history of many valuable specimens gathered by him.

Coming back to the table, we talked politics; we spoke of the state of Europe—the disastrous war into which France had plunged herself having just ended.

I said, "I have heard that your majesty is opposed to the penalty of death."

"A man has not the right to take the life of another," said he, musingly and sadly. "I have been obliged to sign a death-warrant or two; it was because I could not go against the public opinion of the country." Looking then at his watch, he said: "You know that I am in mourning; I am not in good health, and I do not live in Stockholm. Come to-morrow (Sunday) to the Ulriksdal, where I reside now. It is but a short distance from Stockholm." He kindly explained to me the way to go there by boat, and when to start; and added, "I must write the name and how to go there on a card, for fear that you might forget." Having no paper, I begged

him to write on one of my visiting-cards; but the king's plain pencil-case was out of order, and I lent him mine; and, after writing the directions, he rose, which was a hint for me that it was time to leave. His majesty gave me a warm grasp of the hand, and said, "To-morrow!" and I retired after an audience of one hour.

A charming sail of two hours brought me to the landing leading to the Ulriksdal. On the way the steamer passed through a floating bridge, twenty-seven hundred feet in length, connecting the shores of Lilla Wärtan fjord. The palace is most delightfully situated on the shores of the Edsviken (*viken*, the bay). The building occupies three sides of a square, and was built by the great Captain Jacob de la Gardie. King Bernadotte, the grandfather of the present king, used it as a barrack; Carl XV. transformed it into a beautiful summer residence, where he chiefly lived during the warm months. On my way from the landing to the palace, not a soldier, policeman, or liveried servant was to be seen; and the people were walking to and fro. The doors leading to the different staircases were open, also the lower windows, through which any one could easily have entered, and persons were fishing in front of the royal residence.

I paused at the foot of the leading staircase, but saw nobody; then went to the next, and still found no one to accost. Then I called, "Nobody here?" from the bottom of the stair; when a man from the upper story peeped over the balustrade as if to say, "What do you want?" "Is the king at home?" I asked. "No," was the answer. "Yes," said I; "I have been invited to come." The individual disappeared, and soon afterward descended, made a profound reverence, and showed me the way up the stairs. On reaching the first landing, he gave me to understand that his majesty was at the end of a suite of apartments, whither I proceeded. As I came to the fourth room, I saw the king engaged in painting. As soon as his majesty heard my steps, he put on his coat, exclaiming, "Welcome to the Ulriksdal, Mr. Du Chaillu;" and gave me a warm grasp of the hand. "As you see," he continued, "I am painting and finishing a landscape;" and at the same time

he presented me to his instructor. "Why does your majesty take the trouble of putting on your coat?" I asked; "you will not be able to paint so easily." But he kept it on, and we fell into conversation. "I have had great trouble in finding your majesty," I said, "for there are no soldiers or policemen to keep watch over you, or servants looking on, to prevent people from getting into the palace." "Soldiers to guard me!" said he, smiling; "indeed, no: the soldiers are for the country, not for me. I would rather not be a king if I were obliged to have soldiers to watch over me. We are all free here."

Such was the simplicity of Carl XV. The people seem to know so well the proprieties of life that they abstain from intruding, or dogging the steps of a man, though he be a sovereign. This want of curiosity may be also attributed, in part, to the fact that the king is seen everywhere, like any other citizen of the country, and the people therefore become accustomed to his presence.

I begged his majesty to continue painting. "No," said he; "let me show you the curiosities of all sorts that I have collected in this palace. I love this place so much that I always spend a great part of the summer here." He bade me put on my hat, and, placing upon his own head a broad-brimmed soft felt one, led me, in the most unpretending way, from room to room, showing me, with great pride, a beautiful and rare collection of furniture, china, Gobelin tapestry, old pottery, tankards, drinking-cups, horns, etc., many of the objects being very old and of great beauty, and some of much historical interest, and all testifying to his artistic taste.

Then we came to his own room, where he opened a cabinet, and showed me some of his own photographs; asked if I thought they were good, and gave me one, and at my request wrote his name under the picture. Then, taking up a little book containing many autographs of illustrious persons, that he had secured, he suddenly said, "Do me the kindness to write your name in this," which I did, with great diffidence.

When the hour of departure came, he accompanied me to the foot of the stairs and to the door, and, as he said adieu, gave me a warm shake of the hand, wishing me success and

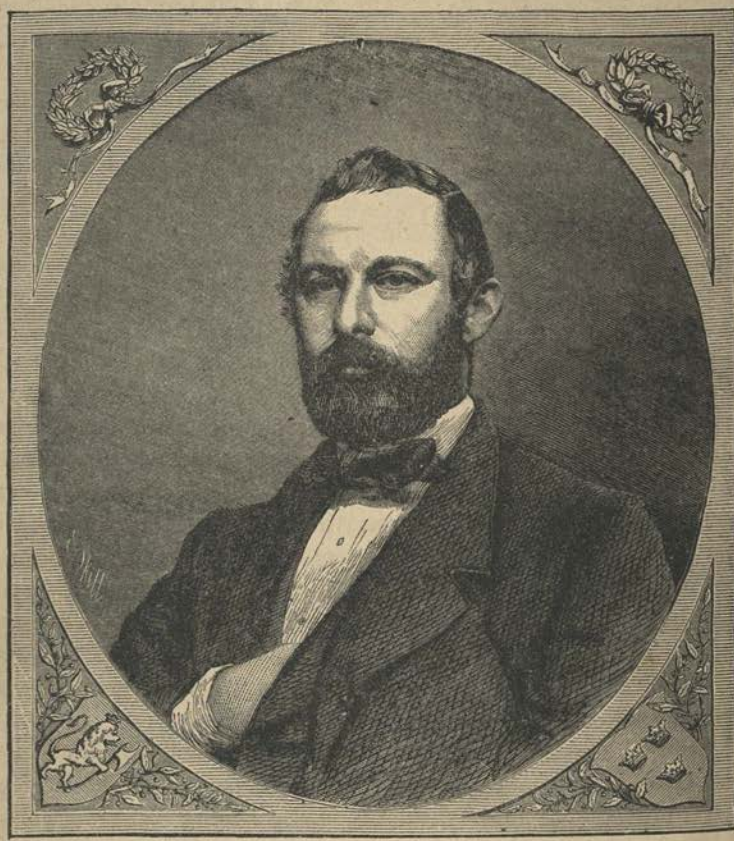
health in my journey to the far North, and adding, "Do not fail to come and see me on your return."

The next morning an orderly brought me a package containing two lithographs representing the dining-room of the Ulriksdal, sent to me by the king, and a letter from one of the chamberlains accompanying the present, with the best wishes of his majesty for my journey.

Such was my first acquaintance with this amiable monarch. The more I saw him afterwards, the more I appreciated his friendly feeling towards me, and, like his countrymen, learned to admire his many noble traits of character.

He was very often seen in the streets of Stockholm and Christiania, and visited the shops like any other gentleman; and, when recognized, every one felt that the sovereign had the same right as any other man to walk the streets without being followed or stared at. Hats were doffed in salutation; but this custom is so prevalent that any well-known citizen has but little time to do anything else than to salute those whom he meets while promenading. Several times I have seen him get out of his carriage to talk to gentlemen, and get in again when the conversation ended—showing, in this respect, the true rule of politeness. His punctuality in all his appointments was proverbial.

His death occurred on the 18th of September, 1872, and he was mourned from one end of Scandinavia to the other. In many humble cottages, where his portrait hung upon the walls, I heard sincere regrets for his loss. He went under the name of "Good King Carl." His best friends were among the peasants and the lowly; many a Swede has told me that they thought that since the time of the Wasas there had not been a sovereign so much regretted. He was loved in spite of all his faults; popularity he never courted, for he was independent, and hated state ceremony; and it was that very independence which made him dear to the masses: they loved his simplicity of manner, his kindness of heart, his frankness, and even his abruptness. There was a certain magnetism in his bearing which attracted men to him. I heard a few persons censure him for his free and simple habits, declaring



CARL XV.

that he should have been more formal. He had faults—who has not?—but they were forgotten in the light of so many good qualities. He had only one daughter, who is married to the Crown-prince of Denmark. He was succeeded by his brother, now Oscar II., who is in many respects unlike him. The present king is an accomplished scholar, a good musician and poet, and a man of great tact; he speaks several languages, and English perfectly; and to him I can only wish long life and prosperity, and as great popularity as was enjoyed by his father, Oscar I., and by his brother, Carl XV.

CHAPTER V.

Sailing towards the Midnight Sun. — Steam Navigation in the Baltic. — Characteristics of Passengers. — Accommodation. — Ice Floes. — Appearance of the Coast. — A Landing. — Festivities on Board. — A Country Hamlet. — Haparanda. — Mode of Travelling.

At the extreme northern part of the Gulf of Bothnia, near the right bank of the picturesque Torne River, lies Haparanda, the most northerly town in Sweden, to which tourists from the South resort, in order to see the midnight sun, and to observe the coast scenery. During the summer months comfortable steamers leave Stockholm weekly for that part of Sweden, stopping at different points. By taking one of these boats, towards the 13th or 18th of June, the traveller can make a short and pleasant trip, and can enjoy the sight of the midnight sun without any exertion. The passage lasts about three days, and one should not fail to secure a state-room in advance, as the boats are often crowded. The only drawback is the noise made by discharging and receiving cargo at the different stopping-places, which prevents one from sleeping.

There are two ways of entering or leaving Stockholm to or from the Baltic—one by the fjord, and the other by the Mälar, which is connected with the sea by the Södertelge Canal. The coast on each side of the fjord is literally lined with a maze of islands, many of them mere rocks above the water; some are quite large, under cultivation, or covered with woods of coniferous trees, while others are the abode of fishermen.

On one of those fine June mornings so common in Sweden at that season of the year I left for the North, just as the sun had risen, gilding with its rays every hill. The steamer passed Waxholm, which guards the approaches to Stockholm; year by year its fortifications are being strengthened. Island after

island came into view, and gradually the scenery became wilder, and the shore more barren; the coast grew bleak; fir-trees, often wide apart, covered the rocky islands; occasionally a windmill or a fisherman's house being visible, or a few cows, belonging to some little farms, grazing near the water. After a sail of four hours we came abreast of the island of Arholma, upon which is found one of the old-fashioned semaphore signal stations, in appearance not unlike a windmill with its projecting arms. Farther on we passed between the main-land and the island of Åland, and entered the Gulf of Bothnia, and then gradually lost sight of land. Our steamer was heavily laden, and ploughed its way at the rate of about ten miles an hour. The sea lay with its surface like that of a mirror; the winds came off the Swedish shore, from forests of pine and fir and fragrant meadows; there were no swells, and hardly a ripple on the water, which was very dark colored, contrasting singularly with the pale-blue sky. I was particularly struck by the absence of aquatic birds. We saw no ducks, gulls, or other water-birds. We sailed in a straight line, keeping away from the numerous islands along the coast. The Baltic and the Bothnia are rich in fish, and along the shores, and on some of the islands, fishing is carried on extensively.

Our steamer did not have many first-class passengers, owing probably to the few places at which we were to stop, and the fear of being detained by ice. Among those in the cabin were the captain's wife, and a young lady about eighteen years of age, who was very refined and extremely self-possessed. She spoke English and French slightly, was returning from Stockholm, where she had been at school, and was going to her far Northern home: there was another lady travelling with her husband. Among the gentlemen were a young custom-house officer, bound for duty at Haparanda during the season of navigation, who proved to be a most pleasant and valuable companion, a young actor, and two merchants.

All were polite to each other, and especially so to me. The captain presented me to his wife, and his wife to the two other ladies; and, as usual on board of vessels, the gentlemen got acquainted with each other without knowing how—a matter

very easily accomplished in Scandinavia—and soon we were all good friends.

The deck passengers were numerous. To observe these on board either Norwegian or Swedish steamers was to me always a source of pleasure, for one sees in them the peculiarities of peasant life. It is very seldom that a farmer, however rich he may be, takes a first-class passage; to him money spent that way is wasted, with no equivalent in return. They are always jolly and light-hearted; no conventionalities of fashionable life trouble them; they shout, they laugh, they slap each other on the back; there is a freedom in everything they do, which might appear shocking to the prim inhabitant of a city. There is a genial kindness and innocent fun in their manners which are very pleasant to see. These people seemed to be the happiest of all on board; they were evidently bent upon travelling in the cheapest way, paying only for their passage, and carrying their food in wooden or birch-bark boxes. Their fare consisted of salt raw herring, butter, cheese, etc., etc., and black coarse soft bread. They had another kind, called Stångkakor, if anything darker than Knäckebröd, but of such a hardness as to render it very difficult to eat, and which, like the latter, is kept for months, strung upon poles passing through a hole in the centre. Now and then old friends or newmade acquaintances treated each other with a bottle of beer at the bar, or oftener with a glass of bränvin, which they drew from a bottle carefully packed in their chests, or safely put in their side-pockets.

When the time to go to sleep came the sight was ludicrous; they had to find room and beds the best way they could, in the midst of boxes, casks, and all sorts of miscellaneous merchandise, and in every conceivable posture, some of which would have shocked the sensibilities of prudish people. Husbands and wives, brothers and sisters and lovers slept in each other's arms, all perfectly unconcerned as to what people might think. Many would lie as close to one another as they could, putting their blankets over them for warmth, or in corners or under tarpaulins. Those who were so unfortunate as to have nothing to cover them would keep awake, or take a nap till the

cold aroused them, and obliged them to take a walk to warm themselves. The nights were chilly, though during the day the sun was quite warm.

These deck passengers have often to endure great hardships when the passage takes several days, and when the weather is stormy, as it often is in the fall of the year; but they would rather be wet, cold, and uncomfortable, than pay a higher fare.

I have always been struck with the uniform politeness of the captains, and of all the officers, on board Norwegian and Swedish steamers. I believe that there is no country where those having command in the steam mercantile marine show so much courtesy and appear so well educated; they always speak some foreign language, generally English, and often French or German, and sometimes the three languages. Their refinement of manner is probably owing to the fact that most of them belong to the navy, or were formerly connected with it.

I was especially pleased to notice how well the second-class and deck passengers are treated. Every one on board is civil to them, and their luggage and other possessions are not roughly knocked about. They are sure of a polite answer to their questions, and no profane language is permitted.

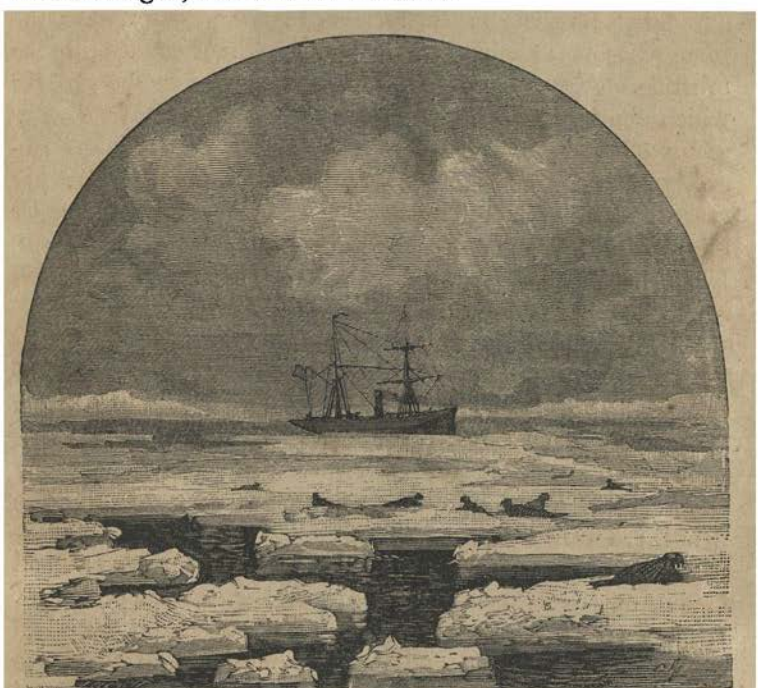
The cabin had good accommodations, and was heated by steam; everything was clean, and our state-rooms were exceedingly comfortable: in the saloon there was a good piano. I did not wonder that everything was so tidy, for all the servants on board of Swedish steamers on the Baltic, including the cooks, are females, and are under the supervision of a stewardess, who is general overseer, and has charge of the culinary department. This custom of employing female servants is said to date from the time of Charles XII., when his wars took away the male population.

The dining-saloon was on deck—a great improvement, for we had none of the smell of food in our cabin. We had three meals a day — breakfast, dinner, and supper — with beer and wines of good quality. Meals were not included in the price charged for passage. The cooking was good, the service excellent, and the tariff of charges very moderate.

There is a custom on board these steamers which well illus-

DECK PASSENGERS.

trates the general honesty of the people. I noticed that after every meal, or at other times, gentlemen wrote in a large book in the saloon. At the end of the second day I found, upon inquiry, that every passenger was expected to write his name after every repast, and to record what he had taken, with such extras as wine, soda-water, lemonade, coffee, liquors, beer, cigars, etc. Where there is a regular bill of fare, and every dish is charged, he has to do the same.



STEAMING TOWARD THE MIDNIGHT SUN.

I was in a great dilemma; for, not knowing this rule, I had not written my name or recorded my orders; I only knew that I had not missed a meal, and that I had treated my friends, as they had treated me, to coffee, cigars, etc., especially the etceteras. I at once requested one of my fellow-passengers to help me out of my trouble; the waitress was called, and, putting our heads together, we made everything right. When

there was a doubt in regard to the order, I put down the maximum. After everything was settled, I told the maid that hereafter she must write down my orders, and not trust to me, as I was very forgetful. Her look, as she answered yes, told plainly that she had enjoyed the fun occasioned by my ignorance of the customs of steamboat navigation. When the passenger is ready to leave, he calls the girl, and gives his name; she puts the price against every item, adds up the amounts, puts the sum she receives in her pocket: when the money becomes too heavy, she gives it, without counting, to the mistress. Almost every one gives a small fee to the girl, for which she is very grateful, and with a courtesy says, *Tackar aldra ödmjukast!*—"Thank you ever so much!"—so sincerely that you almost feel sorry that you did not give her more. The restaurant-keeper runs some risk, for a passenger might forget to put down all the items of his entertainment. Nevertheless, all is left to the honesty of the people, and this confidence makes every one very particular.

The Swedish coast, from the Åland Sound northward, as far as the town of Umeå, forms a horseshoe, and between the two points you lose sight of land. We found great drifts of ice in the sound called Qvarken: a maze of islands rising from the Finnish side checked their drift, and the easterly wind sent large masses towards the shore. On one immense field there were a great number of seals.

We passed the light-house on the island of Norrskär, and farther on the light-ship *Snipan* warns the mariner of danger. After a trip of thirty-two hours from Stockholm we sailed between the main-land and a group of islands, of which the most important is Holmön, opposite the pretty little town of Umeå, but at quite a distance from the coast. Here we met a considerable number of large ice-floes, driven from the Finnish coast towards the Swedish shore. The winter of 1870–1871 had been exceptionally severe, and the fields of ice were met till the latter days of June.

The weather was cool, and overcoats were very comfortable on deck; the little wind we had came from the north. There were still many large fields of rotten ice, and when it blew over

them the thermometer would fall to 42° or 43°; then rise in a few minutes to 50° or 51°; and at night it would remain at 44° or 46°.

Numerous boats, especially built for the hunting of seals in the Baltic or Bothnia, were seen in different directions. These were of very peculiar shape, the forward part rising gradually from the centre to the bow; the head is rounded and high above the water, so that the boat can go over cakes of ice, or land the crew on the ice-floes, to enable them to approach the seals on foot. With a fair wind these boats sail very fast. As we proceeded the sea became darker, and almost fresh; for at that time of the year the body of water coming from the melted snow of the interior and from the range of mountains is enormous. The coast was low and monotonous, and covered with firs, pines, and birches.

As the steamer approached the station, where a wooden wharf has been built, farm-houses, hamlets, and saw-mills came in sight. Each landing has a characteristic of its own; some of them are merely outposts of towns or villages farther up the stream, and are forlorn-looking. As the stranger wanders near their surroundings the woods appear lonely, and the small size of the trees is apt to give him a wrong impression of the vegetation, for all the large ones have been cut down. The rocks are covered with lichens, and boulders are scattered in every direction.

At each stopping-place a black-board is hoisted, upon which is written the hour for the departure of the vessel, as a notice to the passengers. Three sharp whistles, blown at short intervals, call those who have gone ashore for a ramble, and the steamer leaves soon after the last warning. Here passengers were left or taken, their number increasing as we advanced farther north, and the crowd became merry.

Though so early in the season that the Bothnia was not yet free from ice, a large number of sailing-vessels had already come to take cargoes of timber.

There is a look of sadness about the country, which is happily relieved by the deep-blue sky characteristic of the clear atmosphere of Scandinavia. Dwarf forests of pine and fir

lined the roads, while here and there meadows, fields of barley, oats, and rye, relieved the monotony of the landscape. Wild flowers were abundant; a few butterflies flitted hither and thither, and an occasional magpie or crow disturbed the solitude. Along the road a cart was rarely seen. It was a great charm for me to gather, at twelve o'clock at night, in the midst of broad daylight, sweet violets, which grew among the rocks or by the side of the roads, with golden buttercups, and to hear perchance the notes of the cuckoo. The air was so invigorating, the scene so novel, that I hardly ever felt sleepy.

On land it was much warmer, the rays of the sun being so powerful that the heat at noon sometimes reached 70° in the shade. Vegetation was making rapid strides; the pine and fir had already sent out new shoots four inches long. The little towns were quaint, with no sidewalks, the streets paved with cobble-stones; the houses were of wood, with stone foundations, some very large, with one or two stories, and almost all well painted; the windows were gay with roses, carnations, geraniums, and other flowers in full bloom. No persons in rags, no beggars were seen. The men were independent looking; the women comely, wearing handkerchiefs over their heads, and, no matter how poor, always cleanly dressed when in the street. Barefooted and bareheaded boys and girls, happy as all children are, filled the school-houses. The church towered over the other buildings.

As our boat arrived at one of the chief places the whole population appeared to be on the wharf to greet us. Our arrival was to them a great event, and we were hardly along-side the wooden wharf, or quay, when the crowd came on board. How welcome are the first steamers of the season to the inhabitants of that far North! How glad they are when the ice blockade breaks! for with its breaking sunshine has come; they have then an open highway to the seas of the world; their rivers bring down the trees that have been cut during the winter months; their saw-mills run; hundreds of vessels come to load with the immense amount of timber which waits for shipment; their friends come to visit them; families who dreaded the long winter land journey meet again, while others

can go to Stockholm, or to the sunny south of Sweden, or to the Continent; the merchants get their new stock of goods; luxuries from a warmer latitude appear; the fishing-season opens; salmon come into the streams, and are very plentiful; and the husbandman is busy, and looks forward with hope to a good harvest.

Steamers here are a sort of floating restaurant; and while cargoes are being loaded and unloaded, crowds of men come on board to eat and drink—to taste of radishes, asparagus, salad, etc., for as many hours as the vessels stay in port. Some go, most remain till the departure; there is no night, and all the visitors are determined to have a frolic after their meals. Our visitors had a good time, but in the midst of all this jollity there was no coarseness and no vulgarity. The deck over the cabin was crowded; the dining-saloon was jammed; and it was a great day for the good restaurant-keeper; her happy face beamed. There was no rest for the waitresses; they flew about from one place to another, laughed at the compliments thrown at them by their new admirers, and attended strictly to their business; there was no sleep for them; they had to work, no matter how long since they had slept; though tired they were quick, and always in good-humor, and remembered every order. No one could withstand the sight of all this feasting: the feeling that one must eat or drink something became irresistible; and between the general hilarity and the noise of landing the cargo, I felt that it was of no use to go below.

While looking round I observed one group of four or five gentlemen, before whom stood a bottle of wine. They were all standing after the glasses had been filled; they had been invited by one of their number to drink to the health of a friend present, whom he had not met for several years. He made his speech, alluded to the years gone by, and to the old friendship, talking for ten or fifteen minutes. They all bowed, and drained their glasses. The recipient of the toast returned thanks in a speech, and the glasses were replenished.

Another company of friends about to part drank to their future meeting, and again speech-making followed; while

others were laughing and enjoying themselves, the wine and the Swedish punch having evidently exhilarated their spirits. They seemed ready to embrace one another. There was also a party engaged in drinking coffee, and talking upon business matters—evidently merchants, thinking of making money, and probably driving a bargain.

These festivities went on during the whole of the night, until the departure of the steamer, which took place at 5.30 A.M. The last whistle having been blown, there was a general stampede for the shore; the people paying in a hurry, and giving a little money to the good-looking waiter-girls, whom they had kept awake all night.

The total abstinence man may probably be shocked at such a display, but if he tries mildly to remonstrate, the people simply answer him that the Swedes and Norwegians have the longest lives of any people.

After such a scene of merriment the next stopping-place may be at a solitary landing, or some fjord, with only a wooden wharf and a shed, sometimes with hardly a house in sight. But one must not be deceived by this apparent solitude, for often, not far off, between the rocky hills or behind the forests, are farms, hamlets, saw-mills, and at some distance the highway.

As the voyage drew to a close, and we approached the upper end of the Gulf of Bothnia, the twilight had disappeared, and between the setting and rising of the sun hardly one hour elapsed. We came to Strömsund, our last point of destination before reaching Haparanda. Here the steamer remained several hours.

The spot seemed lonely enough. Close to the landing was a small lake, on the outlet of which was a grist-mill, a farm or two in sight, with rocks covered with lichens, interspersed with boulders of granite, small pine or fir trees, and sterile soil. Everything appeared so deserted, that involuntarily one asked himself where the large cargo landed was going to be distributed. A few swallows, high in the air, assured us of a continuation of the fine weather.

Strömsund is at the end of the Råne fjord, not far from the

river of that name, upon the banks of which were farms and saw-mills.

Råneå was about four miles distant, on the highway which skirts the Baltic, and during the navigation season connected with Strömsund by telegraph. The road, like the country, was silent; on my way there I met only two carts, the drivers being women, who walked up the hills instead of riding, for fear of tiring their horses.

The village contained the parish church, a large edifice, which could seat about twenty-five hundred persons, and is often crowded; it had white painted walls, with seats of bare boards. Over the altar was a silvered figure of Christ on the cross, with imitation of blood coming from the nailed hands and feet and from the side. Above the pulpit was written, "Praise be to God in Heaven."

There were no religious paintings on the walls; on the steeple was a cross, over which was a weather-cock. The graveyard surrounded the church, and looked neglected.

At a short distance was a well, common to all, about twenty or thirty feet deep. Inside, somewhat above the water, there was a crust of ice several feet thick, which sometimes remains there all the year round. The water was delicious.

A fair takes place in the beginning of July, and many empty wooden houses, not painted, which are used at that time, gave an abandoned look to the place. Now and then a woman or man was seen walking, making one feel that the hamlet had not been entirely left to itself.

The doctor of the village was at home, and received me most kindly; he told me that the winter had been very cold, the thermometer falling to 40° and 45° below zero; and there was still snow on the ground on the 2d of June. But now, in the gardens, the pease were about two inches above the surface of the ground, and would be fit for the table at the end of August or the beginning of September. The polished pine floor of his house was so clean and white that I was almost afraid to walk upon it. In the unpretending little library there were scientific and medical works, and volumes in English, French, and German; everything was simple and com-

fortable; the rooms were large, and every window was crowded with flower-pots.

He kindly invited me to stay to dinner, but being afraid of missing the steamer, I declined. Still, the country hospitality would not permit me to leave without taking some refreshment, and, if I had been a smoker, to enjoy a pipe or a cigar.

Returning to Strömsund, all was life. I wondered where the people could have come from. Numerous carts had arrived from different parts of the country, to take the cargo that had been landed by the steamer—composed of rye and barley flour, a complete steam apparatus for a saw-mill, barrels of snuff, boxes and hogsheads of claret and other wine, iron pots, casks of nails, dry goods of all sorts, bags of coffee, sugar, and in fact all the commodities found in a country store.

Another steamer had arrived crowded with men from the inland districts, and here two hundred more were to be added to the number. They were all farmers, belonging to the *beväring*, one of the military organizations, and were going to drill and exercise for several weeks, under competent officers, at some point lower down the coast.

From the Råne river the coast, which forms the head of the Gulf of Bothnia, runs east and west. A sail of a few hours brings one to the mouth of the Torne river; but, on account of the shoals and shallowness of the water, vessels have to stop a few miles below. At that time a small steamer took the passengers to Haparanda, a few miles higher up.

The town is in 65° 51′ N. lat., and forty-one miles south of the arctic circle, and has a population of about one thousand, mostly Finlanders. It is 1° 18′ farther north than Archangel, and in the same latitude as the most northern part of Iceland. The sun rises on the 21st of June at 12.01 A.M., and sets at 11.37 P.M.

From the 22d to the 25th of June the traveller may enjoy the sight of the midnight sun from Avasaxa, a hill six hundred and eighty feet high, and about forty-five miles distant, on the other side of the stream; and should he be a few days later, by driving north on the high-road he may still have the opportunity of seeing it.

Haparanda is quite a thriving place, with many large and well-painted houses; it has several stores, and is a sort of commercial depot for the population farther north, its exports being chiefly timber and tar. It has risen to its present dimensions since the cession of Finland by Sweden to Russia. Formerly the seat of commerce was on the island of Torneå, lying almost opposite. It has two churches; a high-school, where students can prepare themselves to enter one of the universities, and where French, English, German, and the dead languages are taught; and public schools for primary education; it also has a newspaper.

This is the last telegraphic station in the north of Sweden whence messages can be sent to any part of the world. The telegraph-operators are all educated men, who have passed a rigid examination, and are required to understand English, German, and French. The same regulations are also enforced in Norway. The postal-telegraph system has always existed in both countries, and the tariff of charges is uniform, whether the distance be short or long.

There is a good hotel, where the rooms are comfortable and the fare excellent; indeed, there are very few towns between Stockholm and this point where you can be so well entertained. The size of the landlord, and that of his good and pleasant wife, spoke well for the food and the climate of the country.

The news of my arrival was soon spread over the little town. The judge, clergyman, custom-house officers, schoolmaster, postmaster, banker, and others came to the hotel to see me, and they all welcomed me to Haparanda. Though living in the remote North, they had all the politeness of their countrymen of the more populous districts of the South.

When I told them that I intended to go as far north as I could by land, they seemed somewhat astonished. When they heard I wanted to cross to the polar sea, "There are difficulties in the way," they said; "the people do not speak the Swedish language; after awhile there is no road, and the country is wild, sparsely populated, and the people will not be able to understand where you wish to go. Will you be able

to eat their food? If not, you must buy what you want here." "The food," said I, "does not trouble me in the least; I can eat anything."

They did not see how I could ever get along. "Just go as far as the high-road, and come back," was their counsel. "No," said I; "I must go as far as North Cape."

When they saw me resolved to go, they took as much interest in my undertaking as if I had been one of their dear relatives; they got an excellent guide for me, and seemed overjoyed that they had been able to find me one, and said that they knew I would be in the hands of a good man. They were not mistaken. His name was Andreas Jacob Josefsson, and proved to be as good and honest a fellow as any one whose services I could have secured. He was a tall Finlander, and had a kind face. He had lived in California quite awhile, and could speak a little English; he had come back to Sweden to rejoin his sweetheart, and be married; he wanted to go back to America, but she did not, and accordingly he had settled here—the home of his wife.

The great charm of travelling in Scandinavia is by the relay stations, called *gästgifvaregård* in Sweden. The conveyance given to the traveller is a cart called *kärra*, drawn by a single horse—a light vehicle, with only two wheels, the body and shafts continuous, generally without springs, and with a seat large enough for two persons, and a moderate amount of luggage.

There are more than sixteen thousand miles of roads in Sweden, all with post-stations, numbering over fifteen hundred. There are four kinds of roads; the *kungsväg* (king's road) being the finest; *häradsväg* (country road), most of which are very good; *sockenväg* (parish road), which is not so good, and often bad; and the *byväg* (village road), which is narrow, and very rough. It may, therefore, be judged that before one can see the country thoroughly there is a good deal to do. In the sparsely inhabited districts some of the stations are very humble, but the traveller is glad to reach them after a hard day's journey.

The distance between each station is generally about one

and a half Swedish miles; seldom less than a mile, or more than two miles, although in some districts the intervals are greater, on account of the scantiness of the population. Most of these stations are farms, and at all of them food and lodging can be had; and many of them are exceedingly comfortable, especially on the high-roads which connect the towns or cities; but in remote or unfrequented districts the fare is very poor, and a stranger finds it hard to get accustomed to the diet. The people who keep them generally receive compensation from

THE KÄRRA, WITH SPRING ATTACHED TO THE SEAT.

the Government, but the amount paid is proportioned to the extent of the traffic. The State makes these arrangements with the most responsible farmers in each district, and good and faithful service is therefore insured. At each station there is a register in which travellers record their names, with their destination, the place they have left, their vocation, and the number of horses they take. On the cover of this book the rules relating to the road are inscribed. The number of hours during which the traveller is required to wait is accord-

ing to the number of horses taken before. The tariff of prices from one station to another is indicated with the utmost precision, so that no mistake can be made. Generally the rate is one krona and twenty öre per Swedish mile in the country, and one krona and sixty öre in the towns. Every month the records are taken up by Government officers, and if any traveller has any complaint to make, he registers it, with his name appended.

In Sweden all the farmers within a specified distance of each station are obliged to furnish horses upon the requisition of the station-master. This law seems to be rigorous; but it is, doubtless, the only practicable way to accomplish the end desired. Hence the stations are established in places where constant supplies of horses can be obtained. The traveller is charged an additional sum for the use of vehicles and harness —the usual rates for the sleigh or cart being three öre per mile for a cart without springs, and six öre for one with springs. The station-master provides the driver. The cost of ferries or bridges is borne by the traveller.

The amount of weight allowed is four hundred pounds, including the passenger; but there is never any difficulty, unless the traveller has an unusual amount of luggage: two together pay fare for one and a half. A driver is fined twenty-five kronor for overcharge. If the traveller hurts the horse by fast driving, he is responsible for damages. The speed allowed by law is one Swedish mile for every hour and a half; but they always drive faster, and the average is a little over five English miles an hour. When sending a *förbud* (that is, ordering a horse in advance), either by messenger or letter, if the traveller comes too late he has to pay twenty-five öre every hour, and the driver is compelled to wait only four hours. Sometimes the post department has to change the stations, either on account of the farmers refusing to have them any longer, or because they are not properly kept.

CHAPTER VI.

The Country within the Arctic Circle.—Leaving Haparanda.—A Finnish Station.—The Mosquitoes.—Female Drivers.—Kindness of People to Beasts of Burden.—Comfortable Farms.—A Hamlet.—The Midnight Sun.—Sattajärvi.—Willing to come to America.

THE country, which extends from the Gulf of Bothnia to the northern extremity of Europe, is almost entirely within the arctic circle, and presents a vegetation not seen elsewhere at such high latitudes. Vast areas are covered with forests of pine and fir, the latter predominating, while many hills are clad with the white birch to their very top.

One can travel long distances by water, boat stations being found on the shores of the lakes and streams. A glance at the map shows how well watered the country is: the rivers swarm with salmon, and the lakes with other fish.

The Lule, the Kalix, and the Torne are the main rivers in those regions. The Kemi flows through Finland.

The Torne River is the longest and the most northerly stream falling into the Gulf of Bothnia, and it now forms the boundary between Sweden and Russian Finland. Its northern branch, the Muonio, rises in Lake Kilpijärvi, 69° N., three hundred miles from the sea; while the Alten, Tana, and other less important streams flow northward into the Arctic Ocean. The mountains slope gently on this side, but fall grand and steep towards Norway.

On the banks of some of the rivers are numerous farms and hamlets, often surrounded by fine meadows and fields of rye, oats, and barley. Vegetation is wonderfully rapid under the influence of almost constant sunshine, seven or eight weeks only intervening between the sowing and the harvest.

The journey from Haparanda to the Arctic sea is extremely interesting, both in summer and in winter, the distance as the

crow flies being over 5 deg. of latitude to the most northern extremity of the land; but the route traversed to Cape Nordkyn and to the Magerö Sound is about five hundred miles. The country is inhabited by Finns, who are cultivators of the soil. The Laplanders roam over the land with their herds of reindeer. The summer climate is delightful, and during the period of continuous daylight one can travel all night if he pleases. But there are great drawbacks: from the end of June to nearly the end of August the country is infested with swarms of mosquitoes, which are very annoying. The fare is coarse, and, to one not accustomed to it, not very palatable.

From Haparanda the high-road goes northward as far as Pajala and Kengis, a distance of over seventeen Swedish miles, passing at times through a beautiful country, and then through forests, moorlands, and desolate regions. There are eleven post-stations, where horses are changed, and where food and lodging may be obtained. On the journey very little luggage should be taken.

We will now for awhile leave the shores of the Bothnia, and go northward, to gain a knowledge of the summer climate of those regions.

The afternoon of my departure the yard of the hotel presented an unusually animated appearance. The judge, the custom-house officers, the banker, and other newly-made friends, had assembled to drink to my health, and to the success of my journey. Speeches were made, and a last admonition was given to my guide, Josefsson, to take good care of me. As my horse started all raised their hats and gave three cheers. I returned them, and, with a crack of the whip, started: as I turned my head to get a last look, they were still cheering and waving their hats. My wiry animal paced at a very rapid gait, without a touch of the whip. We passed two or three farm-houses, well painted, with nice enclosures around the gardens. The Torne River, with its numerous islands, appeared at times; in the distance rose Avasaxa; while woods, meadows, cultivated fields, painted houses, and far-off hills completed a charming landscape. The weather was delightful, the atmosphere dry and bracing, the thermometer marking during the

day 68° to 70°. Late in the evening I stopped at a post-station where the family spoke Swedish, the hamlet consisting of a few scattered farms. The people were at first shy; but, after hearing that I was from America, they became friendly, for several persons from that district had emigrated to the United States. The farm was about twenty miles from the arctic circle. The disappearance of the sun below the horizon was short, and the sunset very brilliant. The sunrise which followed a short time afterwards was indescribably beautiful.

During the night of bright daylight several carts entered the yard. The men unharnessed their horses, put them into the stable, gave them the hay that they had carried with them, and water, and then went into one of the houses, where they could rest and sleep; for in this part of the world the doors of the dwellings are not locked. Some stopped only to rest their horses, while others remained to get the sleep they needed. Most of these carts were loaded with miscellaneous goods, on their way to some country store or hamlet; others had bags of Russian flour, the supply from the farm having run short.

After a breakfast of smoked reindeer meat, butter, cheese, and hard bread, and an excellent cup of coffee, I left the station. The wife at first refused payment, as I had, she said, given more than an equivalent in presents to the children.

At this time of the year the men were busy, either in the fields, floating timber down the stream, or at the saw-mills.

At every station I had a young girl for a driver, and these children of the North seemed not in the least afraid of me. My first driver's name was Ida Catharina: she gave me a silver ring, and was delighted when she saw it on my finger. I promised to bring her a gold one the following winter, and I kept my word. She was glad indeed, when, at the end of the drive, after paying, I gave her a silver piece. Another driver, twelve years of age, was named Ida Carolina. The tire of one of our wheels became loose, but she was equal to the emergency; she alighted, blocked the wheel with a stone, went to a farm-house and borrowed a few nails and a hammer, and with the help of the farmer made everything right in a few minutes; she did not seem in the least put out by the acci-

dent. She chatted with me all the time, though I did not understand what she said, for I did not then know the Finnish language. She was a little beauty, with large blue eyes, thick fair hair, and rosy cheeks. From early life children are taught to depend upon themselves.

Niemis was the next station: the little farm stood by itself, looking poor enough; there were four or five low buildings, with roofs covered with turf. The small house for travellers was scrupulously clean, but had only one room, with two beds, a few chairs, a table, a looking-glass, and a bureau, in which the family stored their wealth; next to this room was a little closet where the milk was kept.

The dwelling-house, close by, was a humble one, and dirty. Its occupants were an aged man, with long, shaggy, black hair, his wife, and a niece, a fair-haired girl named Kristina, who, when I arrived, immediately washed her face and hands, combed her hair, put a clean skirt over her dirty one, adjusted a clean handkerchief on her head, and her toilet was complete. The coffee-pot was then put on the fire, and a cup of coffee was made. The old woman was dark-complexioned, and her hair was almost black—traits certainly not of the Scandinavian or Finnish type; she reminded me of a gypsy. When she heard where I had come from she suddenly hugged me; I, in good-humor, returned the compliment, regardless of consequences, for her hair looked suspicious. When ready to leave, the old fellow, who was my driver, had managed to put on his best coat, which appeared to be some fifteen or twenty years old.

The next station was Ruskola, the best stopping-place between Haparanda and Pajala. The farmer and his wife spoke Swedish, and both understood what comfort meant. The farm was large and productive. At a short distance was the hamlet of Matarengi, with a strange-looking red church, quite old, with a separate belfry, and the parsonage close by. There were several country stores, which reminded me of those found in little villages in America. Many of the farms seemed thrifty, and there was a large tract of cultivated land and fine meadows. We were in the *socken* (parish) of *Öfre* Torneå, which had a population of about twenty-seven hundred.

Should one be detained, he may drive as far as Pajala, and from the high hills on the other side of the stream at that place may enjoy the sight of the midnight sun a few days later. How strange to those living in more southern latitudes are those evening and morning twilights, which merge insensibly into each other! to travel in a country where there is no night, and no stars to be seen; where the moon gives no light, and, going farther north, where the sun shines continuously day after day! The stranger at first does not know when to go to bed and when to rise; but the people know the hours of rest by their clocks and watches, and by looking at the sun.

I fell into a deep sleep, and when I awoke the sun shone brightly; but this was no sign of a late hour, as it was only three A.M. I slept again; and when I awoke everything was so still in the house that I took another nap; when I awoke for the third time, I found that my watch had stopped; then going into the next room, I saw by the clock there that it was one o'clock P.M. The family laughed, for they had kept quiet for fear of disturbing me.

In these latitudes the snow has hardly melted when the mosquitoes appear in countless multitudes, and the people have no rest night or day. They had already appeared, and their numbers increased daily; they became more voracious, and their sting more painful; in wooded districts they are a perfect plague in the month of July and until the middle of August, after which a gnat appears. This bites very hard during the day, but at night leaves one in peace, for it never enters the houses. Last of all comes a species of sand-fly, which also is very disagreeable. I was surprised, at a turn of the road, to see a black cloud, apparently composed of minute flies. It was a swarm of mosquitoes, so thick that it was impossible to see anything beyond. I was hurrying the horse through it when the animal suddenly stopped, and then I saw three men working on the road who had previously been invisible. This seems incredible, but such are the facts. Josefsson laughed, and observed, "We have a saying here, that when a traveller comes he writes his name in a bed of mosquitoes, and when he comes back the following year he sees it again."

We drove rapidly through the cloud, but a part of the swarm followed us like birds of prey. They surrounded us in myriads, and their hum was far from charming. I had never seen such immense swarms before, and had never met anything of the kind in the swamps of the Southern States, in New Jersey, or in Equatorial Africa. One should wear a veil around a broad-brimmed hat, to protect the face. The natives bear the plague with apparent equanimity. These mosquitoes are a distinct species, being heavy and easily killed, and not

ATTACKED BY MOSQUITOES.

taking to wing like the better-known varieties; their bite was less painful than that of the common kind, but it was by no means pleasant. I was obliged to put on gloves, for I had hardly crushed hundreds when the next instant the number of my assailants became as great as before.

Everywhere I noticed the kindness of the people towards their beasts of burden. Horses cannot be hurried where the country is hilly, though I suppose it is sometimes done when a man is under the influence of liquor, or is wicked at heart.

A horse, as soon as he comes to the foot of a hill, stops when he thinks it is time for the people to get out, turns his head towards the vehicle to see that every one is off, and then ascends. If all are not out, he waits, and, when urged by the voice, or by a slight, harmless touch of the whip, he seems quite astonished, and often during the ascent stops and turns his head, as if to say to the remaining occupant, "Why don't you get out?" The farmers and their families invariably walk up-hill; hence the horses are disagreeably surprised when their load remains, especially when the whip slightly touches them on the back. From one station to another the driver often stops, cuts his black bread into small pieces, gives them to the horse, caresses him, treats him to a handful of hay, and then continues his route. This kind treatment not only speaks well for the people, but it also makes the horses exceedingly gentle and docile; vicious ones are seldom found. Colts are much petted, and often come into the kitchen, where they are caressed, and treated to salt, or something else they like.

The station where I remained for the night was poor enough. The building for travellers had only one room finished, and men were sleeping on skins on the floor, and others on benches, in their ordinary clothing. An old woman with her daughter and her baby were in one bed, an old man was in another, and everything looked dirty. I could get only cold fish to eat; one of the men offered to go and spear some, but I concluded to eat this and go to sleep. Some fresh hay was placed on the floor, two reindeer skins were spread over it, a sheep-skin blanket was put over all, and my couch was complete.

The traveller is surprised to meet so many comfortable farms, with large dwelling-houses, which, with the barn and cow-house, are the three prominent buildings. There are several other houses besides, such as sheds, storehouses, blacksmith shops, etc. In the yard, which is generally enclosed by the houses on three sides, is the old-fashioned well with its sweep, a bucket at one end and a stone at the other. From the well a trough communicates with the building where the

cows are kept. This structure is peculiar; the ceiling is low, the windows very small, giving but little light; the place is entirely floored, and pens are built on each side; along these a gutter gathers all the manure, which is preserved with great care. The cattle do not lie on straw or hay. At one end of the room is a large piece of masonry, encasing an iron pot three or four feet in diameter and three feet deep, used for cooking food for the cattle; this food is generally coarse marsh grass, mixed with the dust coming from the threshing of the grain; this pot is also used as the bathing and washing-tub. Sheep, when numerous, have a house by themselves; if not, they are penned in a corner. There is a separate stable for the horse.

The dwelling, with few exceptions, consists of a single story, usually containing two rooms, one on each side. One is used as bakery and kitchen, and also as a sleeping-room; at one corner is the fireplace, a strange structure, six or eight feet square, made of solid flat slabs of stone, generally plastered over. Wood is placed in these ovens, and, when it is consumed and only charcoal remains, a sliding iron trap-door prevents the heat from escaping, warming the walls. The heat thus produced for the first few hours is very great, and often the room is made unbearable to those who are not accustomed to such an atmosphere, which is often retained for two or three days; in one section of the structure there is an open fireplace used for cooking. Beds are placed along the walls, in number according to the size of the family. These are a kind of sliding box, so that they can be made of different widths, according to the requirements; they are filled with hay or straw, furnished with home-made blankets or sheep-skins, and sometimes with eider-down covers and pillows. In the morning the box is drawn in, and, when covered with a board, answers for a sofa, upon which people rest during the day. The whole family, including servants, males and females, sleep in this room. On the other side is the guest-room, which is also used as a sleeping apartment. One or two bedsteads, the beds filled with the down of the eider-duck, the blankets made of the same material, form the chief part of the furniture.

There are many small and poor farms, where a large family has to work hard to get a living from the soil; in their homes, dirty and crowded, typhus fever often makes great ravages. The farms are generally by the banks of rivers or near lakes, for there the land is better, and fish is plentiful.

The living eked out of the soil in this northern region would be scanty indeed but for the fish caught in these waters, and the abundance of game-birds. The money obtained from the sale of these, together with the revenue derived from the dairy, often constitute the farmer's sole income.

From Matarengi the road ascends a steep hill, out of sight of the river, passing for several miles through a desolate country, made more dreary by the burning of the forests.

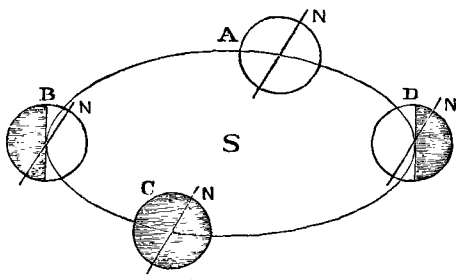
Between the stations of Kunsijärvi and Ruokojärvi (*järvi* means lake in Finnish) we crossed the arctic circle at 66° 32′ N., or 1408 geographical miles south from the pole, where the sun shines for an entire day on the 22d of June, and the observer will see it above the horizon at midnight, and due north. After that date, by journeying north on an average of about ten miles a day, he would continue to see the midnight sun till he reached the pole. On the 22d of September the sun descends to the horizon, where it will rest, so to speak, all day long; on the following day it disappears till the 22d of March.

When returning southwards at the same rate, the traveller will continue to see the midnight sun in his horizon till he reaches the arctic circle, where for one day only, as we have seen, the sun is visible.

The sun at midnight is always north of the observer, on account of the position of the earth. It seems to travel around a circle, requiring twenty-four hours for its completion, it being noon when it reaches the greatest elevation, and midnight at the lowest. Its ascent and descent are so imperceptible at the pole, and the variations so slight, that it sinks south very slowly, and its disappearance below the horizon is almost immediately followed by its reappearance.

I will now try to explain the phenomenon of the midnight sun: the earth revolves about the sun once every year, and

rotates on its axis once every twenty-four hours. The earth's orbit, or path described by it in its annual revolution about the sun, is, so to speak, a circle somewhat elongated, called an ellipse. The axis, about which the daily rotation takes place, is a straight line passing through the centre of the earth, and the extremities of which are called poles—one the north, and the other the south pole. The axis is not perpendicular to the plane of the orbit, but is inclined to it at an angle of 23° 28′, which angle is called the obliquity of the ecliptic. The earth, therefore, in moving about the sun, is not upright, but inclined, so that in different parts of its course it presents always a half, but always a *different half*, of its surface to the sun—which will be plain from the accompanying diagram.



EARTH IN ITS ORBIT.

S represents the sun; *A*, the position of the earth March 21st; *B*, the position of the earth June 21st; *C*, its position September 21st; and *D*, its position December 21st.

Twice in the year, March 21st and September 21st, the exact half of the earth along its axis is illuminated. On these dates, therefore, any point on the earth's surface is, during a rotation of the earth on its axis, half the time in light, and half in darkness—that is, day and night are twelve hours each all over the globe. For this reason these dates are called *equinoxes*—March 21st being the vernal, and September 21st the autumnal equinox. As the earth moves on in its orbit after March 21st, the north pole inclines more and more towards the sun till June 21st, after which it turns slowly from it. On September 21st day and night are again equal all over the earth, and immediately after this the north pole is turned entirely from the sun, and does not receive its light again till the following March. It will thus be seen that from the vernal to the autumnal equinox the north pole is in sunlight, and has a day of six months' duration. As the north pole becomes more and more inclined towards the sun, more

and more of the region around that pole becomes illuminated, and therefore any point in that region is, for any given twenty-four hours, longer in light than in darkness, and its day is longer than its night. The nearer any point is to the pole the longer during this time is its day.

The number of days, therefore, of constant sunshine depends on the latitude of the observer; and the farther north he finds himself the greater will be this number. Thus, at the pole, the sun is seen for six months, at the arctic circle for one day, and at the base of the North Cape from the 15th of May to the 1st of August. At the pole the observer seems to be in the centre of a grand spiral movement of the sun, which farther south takes place north of him.

We have here spoken as if the observer were on a level with the horizon; but should he climb a mountain, the sun, of course, will appear higher; and should he, instead of travelling fifteen miles north, climb about 220 feet above the sea-level each day, he would see it the same as if he had gone north; consequently, if he stood at the arctic circle at that elevation, and had an unobstructed view of the horizon, he would see the sun one day sooner. If he should climb to a greater height, and have the same unobstructed view, he would see the midnight sun for a correspondingly longer time. Hence the tourists from Haparanda prefer going to Avasaxa, a hill 680 feet above the sea, from which, though eight or ten miles south of the arctic circle, they can see the midnight sun for three days.

The brilliancy of the splendid orb varies in intensity, like that of sunset and sunrise, according to the state of moisture of the atmosphere. One day it will be of a deep-red color, tingeing everything with a roseate hue, and producing a drowsy effect. There are times when the changes in the color between the sunset and sunrise might be compared to the variations of a charcoal fire, now burning with a fierce red glow, then fading away, and rekindling with greater brightness.

There are days when the sun has a pale, whitish appearance, and when even it can be looked at for six or seven hours before midnight. As this hour approaches, the sun becomes less glaring, gradually changing into more brilliant shades as it

dips towards the lowest point of its course. Its motion is very slow, and for quite awhile it apparently follows the line of the horizon, during which there seems to be a pause, as when the sun reaches noon. This is midnight. For a few minutes the glow of sunset mingles with that of sunrise, and one cannot tell which prevails; but soon the light becomes slowly and gradually more brilliant, announcing the birth of another day —and often before an hour has elapsed the sun becomes so dazzling that one cannot look at it with the naked eye.

At the hamlet of Pirtiniemi, on the banks of a small lake, the high-road suddenly ended, being continued on the opposite shore. A few farms were seen, but considerable patience was required before a traveller could pursue his way; the horses had been let loose in the wood, to seek their own food, and it took some time to find them. Arriving at the shore, we crossed in a large flat-boat, which could take two carts and two horses; it was managed by two old women, who by their vigorous pulls showed that they understood their business; ten minutes were occupied in crossing to the northern side, where there were several farms. The cattle were mostly of small size, but very fine; there was also a superb herd of twenty-six cows, nearly all of which were white.

My driver, a girl of about thirteen, seemed to have no fear of me, although not another soul was to be seen on the high-road, and Josefsson was far behind. I gave her some candy, with which she was delighted, and, putting her arm around my neck, gave me a kiss.

The drive continued to be monotonous, but I loved to tarry at the different hamlets. At Sattajärvi, the last post-station before reaching Pajala, old and young flocked around me, and Josefsson held them in conversation. They marvelled when they heard that he had been in America; and, pointing to me, shouted, "Talk American to him!" and then all became silent to hear us talk.

Children came up in swarms to join the merry party. I thought I never had seen such a gathering of beautiful young people. Their coarse diet seemed to agree with them, for they were pictures of health. The girls had such pretty names as

Ida, Kristina, Lovisa, Margarita, Elsa, and Helena. They were handsome, with light hair, deep-blue eyes, rosy complexions, and pearly skins; and presented a marked contrast with the older women, who appeared careworn, and bore the traces of hard work.

Girls in Scandinavia do very little hard work until they are confirmed. Their early years are passed in school; but they develop early, for they have household duties to perform, and plenty of exercise in milking and feeding the cattle, and working a little in the fields. All this tends to health and the development of muscle. Between the ages of fifteen and seventeen many are extremely beautiful; but they soon fade, their features becoming coarse later in life. I asked some of them if they would like to go to America, and the answer was an enthusiastic "Yes!"

I especially noticed one, named Kristina, about sixteen years of age, who followed me, in company with many others, wherever I went. She seemed to be attracted towards me, often holding my hand, and entering into animated conversations. "Would you like to be my driver, and come with me to America?" I asked. "Yes!" said the girl, her beautiful northern blue eyes looking at me; and "Yes!" said her mother. Mother and daughter suddenly disappeared, and I thought I had frightened them away; but they had gone to prepare dinner for me.

When ready to leave the place, the following adventure awaited me: I was astonished to see Kristina coming towards me with all her fortune—a bundle of clothes—wrapped in a handkerchief. Her father, mother, sisters and brothers, were by her side. All the population of Sattajärvi had come to say good-bye to the girl. She was dressed in her best clothes, as if going upon a journey; and as I stepped into the cart she followed me, and all the people shouted, "Good-bye! Live well! Write to us, Kristina!"

"Are you going to take that girl to America?" said Josefsson to me. "The road is too hard for her to follow us."

"Certainly not," said I. "She is to drive us to Pajala."

"No," said he; "they expect you to take her with you to

America. Don't you see? all her family are here. Her father has come from the fields; all the people are here to say good-bye; and she has all her clothing in that parcel. They all believed you were in earnest."

"Tell them," said I, "that she is going to drive me, as several other girls have done before, but only to Pajala; that I cannot take her through the hard country in which I am to travel; and that she would not have strength to follow me."

The mother began to cry; she wanted her daughter to go to America with me. "Man!" said she, "are you going to listen to your guide? I am sorry for you, that you have no will of your own; I pity you."

Kristina got out of the vehicle, became angry, and would not drive me. As we left, the mother sent a volley of reproaches after poor Josefsson, who said they had all believed that but for him I would have taken the girl with me to America. Visions of wealth for their daughter had appeared to them; but the castle they had built in such a short time was already a ruin. The people, however, called after me to "come again."

A drive of about two hours brought me to Pajala, the spire of whose parish church, gilded by the rays of the midnight sun, was seen in the distance.

The hamlet is near 67° 10′ lat., on the right bank of the Torne River, which it overlooks, a little above its junction with the Muonio, at which point the stream is three hundred and thirty feet above the level of the Gulf of Bothnia.

The population is about one hundred and fifty, with twenty-five homesteads, thirty-five horses, two hundred and twenty head of cattle, and about six hundred sheep; so that there was plenty of wool for homespun clothing. The richest man was said to be worth about ten thousand dollars, and several others are worth from one to four thousand—the former sum buying here a pretty good farm, with a comfortable dwelling-house, and other buildings. The parish numbered three thousand five hundred and twenty-five souls. It has now a fine school-house, which is a credit to the small population of that northern region. The place has a very comfortable inn, whose

charges were very moderate. At that time of the year salmon was abundant, and this, with delicious soft bread, dried or smoked reindeer meat, milk, good coffee, excellent tea (which no doubt came from Russia), and Swedish beer, made up the bill of fare: everything was served in a cleanly way, and constituted a repast fit for a king.

The salmon rarely bite at the hook, but are caught in traps or nets placed just above the rapids, or where the water runs swiftly. While I was in Haparanda several boat-loads were landed daily. This year the price was considered high—five kronor for twenty pounds' weight, while in some years it is not more than three or four kronor; but it will become dearer year after year, as, with the introduction of steamers, the people have begun to export fish.

The parsonage, where I was received with great kindness, was large, with everything in it scrupulously clean and simple; the pine floors were without carpets, but spotless; the books revealed the culture of the owner, and the newspapers from Stockholm, received weekly by post, showed that even here the people could know what was going on in the world.

The church was a fine building, in the shape of a Greek cross. The ceiling was concave, the pulpit simple—a relic of the old church: on the altar was a picture of the Saviour crucified, and Mary Magdalene coming to him. The burial-ground, not immediately adjacent, was enclosed by a rough stone wall, the entrance being through a white-painted gate. The first object that struck my eye was the coffin of a little child lying on the ground, covered with a white pall, which had been sent to be buried on the following Sunday. Then I came to a grave, surrounded by a painted railing about eight feet square; in the centre was a circular mound, in the middle of which was a rose-bush in a pot, and a young girl was watering it. "This is the grave of my mother," said the worthy parson. "We have no grave-diggers," he added, "and the families of the dead dig the grave themselves. In the old graveyard lies the body of Læstadius, who did so much good in preaching to the Lapps against the vice of drunkenness." On our return he talked for awhile of America, and of the numerous sects found

there, and then brought out a bottle of Swedish beer, which I enjoyed greatly. When I left, he expressed the hope that we might meet again. "You will be always welcome to the parsonage."

Before my departure I visited several of the farms, and was received everywhere with kindness; question after question was asked of Josefsson about me, and all wondered why I wished to go so far away from my home to indulge in sight-seeing.

CHAPTER VII.

Two ways of going North.—Crossing the Torne.—Ascent of the Muonio.—A Boat-station.—The Making of Tar.—Ants.—Muoniovaara.—The Palajoki.—A Thunder-storm.—Solitary Farms.—Fishermen.—A House of Refuge.—Descent towards the Arctic Sea.

From Pajala the journey northwards may be continued in two ways: by ascending the Torne, or by crossing the narrow tract of land opposite Pajala, and going up the Muonio River. The first is the outlet of the Torne Lake, a considerable sheet of water, 1308 feet above the sea, the upper extremity of which is 68° 25′ north, almost on a line parallel with the Ofoten fjord and the Lofoden Islands in Norway. On its banks are found the hamlets of Vittangi and Jukkasjärvi, the latter being a great rendezvous for Laplanders.

The Muonio is decidedly the better route, as it runs through a larger extent of country; it rises in Lake Kilpisjärvi, the northern shores of which are a few miles above 69° lat., and form a part of the frontier between Russian and Swedish Finland. The country for twenty miles westward of Pajala is somewhat thickly settled, especially on the banks of the Tärendö River.

The only way to travel in summer is by water. There are regular boat-stations, which supply lodgings and food. The fare, regulated by law, is at the rate of one krona a man for every Swedish mile, with a small additional sum for the use of the boat.

The journey on the Muonio is very exciting; rapid after rapid is encountered, all danger being avoided by the wonderful dexterity of the boatmen. No fatigue is experienced, for during the nearly three hundred miles ascent one has to walk only now and then in order to avoid some of the worst parts of the river. Towards the end of June the river is much

swollen. The rush of the water was very fine—the angry billows filling the forest with their roar.

On the last day of June, an hour and a half before midnight, we crossed the Torne. Following the boatman, who carried my luggage on his back, after about an hour's walk I came to Kieksisvaara, the first boat-station, situated on a hill commanding a fine view of the country, and overlooking the river Muonio. The people were all asleep, as it was midnight; the sun had become paler and paler, its golden glow shedding a drowsy, quiet light over all the landscape, and a heavy dew was falling; the house-swallows had gone into their nests, the cuckoo was silent, and the sparrows could not be heard—nature seemed to have gone to rest in the midst of the sunshine.

The hills were covered to their tops with dark fir-trees; contrasting with them was the green new foliage of the birch, the white trunks of which seemed, in the distance, like pillars of silver.

Suddenly a door opened, and a maiden stood before me, looking at the sun, as if to ask what time it was. Her eyes were as blue as the sky above, and her complexion rosy; she was bareheaded and barefooted; her yellow hair, hanging carelessly over her shoulders and falling below her waist, seemed to have been dyed by the rays of that midnight sun; her feet rested upon the green grass, which made them appear doubly white. Seeing me, she started, not expecting to meet a stranger, and was about to make a hasty retreat, when the voice of Josefsson in her own language reassured her. She stopped, and, looking at me, said: "Stranger, are you looking at the midnight sun? now the sun shines night and day. But the summer in our far northern land is short; it gives us hardly time to collect our harvest. Our winters are long and often stormy."

From this maiden my eyes were directed to the sun. Just after midnight I began to notice a change; the glow brightened, and increased rapidly to a magnificent red. The sun's rays gilded the forest and the hills, and nature seemed to be awake again; the sun gradually became more brilliant, until at last it was so dazzling that I could not look at it.

Three boatmen were to take us up the river. One of them seized the little hand-bag containing my luggage, and we started. We soon stood on the banks of the clear Muonio, and we could hear the roar of the rapids, but the vapor rising from the water prevented us from seeing anything. It was then 1.30 A.M.; the thermometer marked 51° — a fall of 6° since 10.30 P.M.

Our boat was made of only four planks, and very light; its length was twenty-seven feet, and its greatest depth one foot nine inches; the broadest part was two feet eleven inches, at a distance of six to ten feet from the bow; the keel was two and a half inches wide. This form is the best for the turbulent stream and rapids; they have but little draught, and are very buoyant; the keel is strong, and protects the bottom when among the rocks, while heavy ribs protect the sides. Each boatman had a pole ten or twelve feet long, of great flexibility and strength, and no oars or rudders are used. My chief boatman, Hendricks Wilh, was at the bow, and the two others took their stations at the stern. We were soon confronted by a rapid, where the water was rushing between boulders with great force, and I was able to judge of the dexterity and strength required in this navigation. The poles are put under the boat instead of along-side, and are often much bent by its weight; Hendricks supported himself and the other two boatmen against the inside, and soon was in a dripping perspiration. These currents have to be studied, in order to know how to steer.

As we pushed along we frequently disturbed stray flocks of ducks. Where the stream was not very swift we ascended rapidly. The river was deep, and its waters so clear that we could see the rocks and boulders resting upon its bed at a great depth.

After a journey of four hours we reached Kolare, having travelled about three Swedish miles.* When we came to the house the silence of the place showed that every one was fast asleep, but our arrival was the signal for all the family to get

* A Swedish mile is 6.64 English miles.

up. The fare at these stations is of the plainest kind, and consists of bits of dry mutton, as tough as leather, smoked reindeer meat, butter, cheese, milk, hard bread, and sometimes fish. The coffee would be very good, but is often spoiled by putting in a large quantity of salt, to give it flavor. They often have only the stångkakor.

In the travellers' room there is a fixed tariff for every article supplied, so that no imposition can be practised; but, of course, when a rich stranger comes, an effort is made to improve the fare—the coffee, for example, is made stronger—and for such attentions a little more is expected, and it should be given. I was charged only sixty öre for my breakfast.

Near the house two boats were being constructed. These boat-stations are very convenient, allowing one in a hurry to travel fast, as at each place he gets fresh men, and has generally to wait but a short time; in twenty-four hours nine Swedish miles can be easily accomplished.

My new boatmen were brothers, whose appearance was singular. Their long, frizzly, fair hair fell below their necks, and it was so thick that they used a wire-card comb, similar to those formerly employed in carding wool by hand.

Between the stations of Huuki and Kilangi the distance is over four Swedish miles, and the ascent required nearly ten hours. Rapid after rapid was passed, and often I expected to be pushed back by the force of the water, and sent against the rocks or gigantic boulders; the poles of my boatmen fairly bent under the pressure, but they never slipped from their hands. At times we had to pass between rocks where there was just space enough to allow the boat to go through, while at other times we were sent back by the rush of the waters against the boulders. Accidents are rare, but when they happen it is almost always in the descent, when the navigation is more dangerous than during the ascent. At the foot of long and dangerous rapids we went on shore, two of the boatmen pulling the boat with a long rope, while the third remained in it and steered close to the land.

The descent of the rapids at this time of the year, when the snow is melting, is full of excitement; the rafts of timber and

THE MUNDUM TREE

boats follow the swift current of the stream, and would surely be destroyed but for the skill and daring of these boatmen.

The river does not present the picturesque appearance of the Torne below Pajala. The banks are not high, often flat; but the water here also is so clear that it appeared like a sheet of glass.

How beautiful was the hour of midnight! How red and gorgeous was the sun! How drowsy was the landscape; nature seemed asleep in the midst of sunshine; crystal dew-drops glittered like precious stones as they hung from the blades of grass, the petals of wild flowers, and the leaves of the birch-trees.

Before two o'clock the swallows were out of their nests, which they had constructed on the different buildings of the farm. How far they had come to enjoy the spring of this remote region! I did not wonder that they loved that beautiful but short summer, or that they came year after year to that Land of the Midnight Sun.

People who have seen only muddy rivers can hardly realize the beauty of such clear streams as those of Scandinavia. The clearness of the water makes one thirsty, and often I could not resist the temptation to test its purity.

Several miles were passed without seeing a house; occasionally the smoke among the trees marked a place where the people were making tar, which is manufactured in great quantities. It was sad to see the havoc that devastating fires had made, destroying immense tracts of valuable timber.

Stopping for the night, I entered a house, and found the farmer and his wife in bed; as I awoke them, the wife raised her head from the pillow, and said, "What do you want, strangers?" I replied, "We want to sleep here." "Welcome!" was the response. The good woman arose, put on her stockings and shoes, went into the next room, where she prepared a bed, and then produced from a pantry an ample supply of milk, bread, butter, cheese, and smoked reindeer meat, and said, "Eat, if you are hungry; drink, if you are thirsty, and go to bed;" and then she bade me good-night, and went back to her room.

The red fir-tree has two varieties — the *Pinus sylvestris*, and another with shorter needles, the *Pinus friesii*. The tree here is exceedingly rich, and produces a great amount of resinous matter. Only the roots of trees that have been cut down are used, and thus no timber is destroyed; hence the forests that have been burned are not entirely valueless. These often remain in the ground for years, and are then dug out, and split into medium-sized pieces during the winter or spring; they are of a deep red color, exceedingly hard, and so rich that when burned in an open fireplace the tar exudes. It is then prepared in the following manner: a favorable place is selected, where less labor is required in its manufacture, the spot chosen being on the declivity of a hill, or between two hillocks sloping gently towards each other. A hole or gully is excavated, from three to five feet in diameter; rails are put close together on the ground, gradually inclining towards the centre, so that the tar may flow into it; over these rails is placed a layer of birch-bark, which is covered with several inches of clay-like soil, the whole having the appearance of a basin, which varies from twenty to thirty feet in diameter. The pieces of wood from which the tar is to be extracted are piled carefully and closely in the hollow; then, when all is completed, the whole mass assumes something of the shape of a bee-hive, and is covered with earth. The roots are then set on fire, and, being smothered, burn slowly for several days, the tar dripping into the basin, and flowing out through the hole into a gutter placed in position to receive it. When by chance there are not barrels enough, the tar is kept for a time in hollows of the earth.

The tar is floated down the river in a singular manner. One or two rows of barrels are made fast, above and below, to long poles, and this sort of impromptu raft is then committed to the current, reaching its destination safely. Great quantities of tar come down from the rivers of the North. Sweden has some years exported over one hundred thousand barrels.

While I wandered in the forest I often met several species of ants, among them was the *Formica rufa*, called in Swedish

stackmyra, common even thus far north. Following a well-beaten path I came to the ant-hills, which are about two and a half feet in height, apparently built of small pieces of wood. Great numbers were coming from every direction, each carrying its little stick, and depositing it somewhere on the hill. When they ascended the sides of the hill the sticks under them would often give way, but they never relinquished their task till they had accomplished it. I had often to demolish their hill to the depth of about one foot before I found them. Many were carrying eggs, and when I placed a stick before them they would stand up on their hind legs and seize it, thus showing their bravery.

About twelve and a half Swedish miles from Pajala we came to the Muoniokoski rapids, below which is a miserable hamlet called Muonionalusta, with a chapel, where services are held only a few stated Sundays during the year. Here my boatmen left the river, and after a walk of three or four miles through very swampy soil, covered with fir and pine, we found ourselves suddenly at a fine farm. Above the door of the house were written the words—

"KUNGL: POST-STATION."

This was Muoniovaara. I was received by Herr Forsström, who was a Swede, and by his wife in a most kindly manner. Two pleasant, modest, bashful young ladies, who bore the characteristic Swedish names of Hilda and Hedda, and three sons, Gustaf, John, and Oskar, composed the family of that comfortable northern home.

The farm overlooked the Muonio, which here widened into a lake, the meadows extending to the water's edge. Near the house was a vegetable garden, in which pease were about two inches above the ground, and carrots, potatoes, and barley were well forward; but grazing and butter-making were the chief industry, as the grain crops in this region were uncertain, and the farmers accordingly planted hardly enough for their own wants, preferring to buy their flour.

On the other side, in Finland, is Muonioniska, which has a church, and is the residence of a clergyman. There, as in

Sweden and Norway, the people are Lutheran; for, since the acquisition of that province by Russia, the efforts of that government have failed to turn the Finlanders from their Protestant faith to that of the Greek Church.

Herr F—— was postmaster: the mail brought the letters and newspapers semi-monthly. The only society they had were the clergyman and the länsman from Muonioniska, for the farmers have not the education that can enliven their solitude; they depend upon themselves and the journals for recreation.

The farm was a very good one, and the milch cows, fifteen in number, were the finest I have seen in the north of Sweden; the dairy had to be looked after, and a large herd of reindeer were pasturing on the mountains. The young ladies were excellent weavers, and made the garments for the family. Herr F—— had, in addition, a store, just like one of those little country stores in which the people can find the things they want; it was largely patronized in winter by the Laplanders—who, however, are not to be seen along the route during the summer.

The house accommodated travellers, and, considering the distance the articles had to be brought, the charges were exceedingly moderate. The clergyman was invited to partake of the good cheer, and it was pleasant to see the host and good pastor smoke enormous pipes while enjoying their toddy. At this place, far from the sea, within a few miles of 68° N., every luxury had to be transported in winter from the Gulf of Bothnia.

The Muonio, from Muoniovaara northward, takes a more westerly direction; the population becomes more scarce, long stretches being passed without seeing a single house. The ascent of the river is laborious, the stream often being but a succession of rapids, the most formidable being the Kelokortje, up which the boat had to be hauled. A hard pull of fourteen hours brought us to the Palojoki (joki, in Finnish, river); the boatmen were nearly exhausted, for we had passed twenty rapids, and the day had been very warm, the mercury rising from 77° to 82°, and at 6 P.M. still marking 70° in the sun;

at 7 P.M., 68°; and at 9.30 P.M., 64°. At the mouth of the river is the hamlet of Palojoensa, or Palojoki, composed of eight or ten scattered farms, looking bare enough: the inhabitants seemed to be a cross between the Finns and the Lapps. The grass the people could gather was hardly enough for their cattle, which had to be fed on both lichen and hay; barley and potatoes still grew, although the latitude was above 68° north; but these were uncertain crops, frosts often occurring in August. The inhabitants possessed herds of reindeer, but these were now pastured on the mountains. A room in one of the farms was used as a school-house, a teacher coming to take up his residence in the hamlet during his term of service. The station was one of the best of the farms.

From Palojoensa there were two ways of going north: one by continuing the ascent of the Muonio, famous for the beautiful scenery of its upper part, to Lake Kilpisjärvi; the other, by stopping at Karesuando, about four Swedish miles higher up, and thence overland to the Lapp village of Kautokeino. I had determined to take the latter, as being more direct, when I heard from one of the villagers, who had been fishing in the lakes in the interior, of a much better one, almost all the way by water, and by ascending the Palojoki. All agreed that I should take this last.

The Palojoki, one of the affluents of the Muonio, is a small river running nearly north, having in its course a great number of rapids. The boats used for its navigation are smaller than those on the Muonio, but built on the same principle, with four planks strongly ribbed, and a heavy keel, to resist the thumping which they receive. Two boatmen are required, and two passengers only can conveniently be taken. This route had a great advantage, having never before been taken by any Swede or Norwegian, as I was subsequently informed by Herr F—— on my return to Muoniovaara the following winter, 1872–1873. My boatmen rejoiced in the names of John Mathias Bass and Erik Gustaf Laïgula, or some name of that sort.

The river was low on account of the long drought. As I came on the banks, and saw the boulders in the stream and the

small amount of water, I thought we should never be able to ascend, notwithstanding the great skill of the Muonio boatmen. Our boat, however, was equal to the occasion, and bounded from rock to rock like a cork or an India-rubber ball, and we succeeded in getting over the first rapid, and for awhile into deep water. We had ascended a short distance when we heard a bell ringing in the wood, and in an instant saw twelve reindeer running towards the river and looking at us. They had recognized the voice of their master, and seemed glad to see him — some of them even entering the water to get to him. These were the first reindeer I had met. Their owner told me that they were worth twenty-seven kronor per head.

The shores were lined with forests of firs, mingled with birch. The sound of the rushing water in the rapids was very pleasant to hear. Even though so far north, the cuckoo was heard; flocks of ducks flew away at our approach, and sometimes a goose would be startled from her young ones. Now and then we passed a queer bird-house, made fast to a tree, varying in size from eighteen to twenty-four inches in length, and from eight to twelve inches in diameter; some were dug out of a tree, with the top and bottom covered with bark, and others were made entirely of the latter. These were intended to entice a species of water-birds which lay their eggs in the hollows of trees; and there was a hole in the centre large enough for a man to put in his hand and remove the eggs. Some of these birds lay a score of eggs or more, which are taken by the owner of the nests. These bird-houses were the only sign of human neighborhood we could see.

The river a little farther up widens, and its banks are skirted with meadows, from which a great deal of hay is obtained. The forests were carpeted with long reindeer-moss of a greenish-white color, the finest I saw during my travels in Scandinavia.

This 5th of July was the warmest day I had met here, the temperature at seven o'clock A.M. being 67° in the shade and 109° in the sun; at nine, 72° in the shade; between noon and one o'clock, 82°, and 118° in the sun. A thunder-shower fol-

lowed, without cooling the atmosphere: at 3.30, 82°; at 4.30, 79°; at 6, 78° in the shade, and 98° in the sun.

At one of the rapids, where the men had to pull the boat with a cord, I ascended the steep, sandy bank, about eighty or one hundred feet high, in order to observe the country. It was an extensive, slightly rolling region, entirely covered with lichens, which could furnish an immense amount of food for reindeer; small knotty birch-trees were scattered far apart, and there was a solitary fir-tree. A patch of snow was in sight, and the country looked arid and desolate, and had evidently been under water at a former period. There were myriads of mosquitoes; where they came from I could not tell, for there were no swamps in the vicinity.

A short distance farther on the men dropped their poles, and stopped on the left bank of the stream, at the foot of a path. "We are going to spend the night at a farm not far from here," said Mathias, "for we are tired." I did not wonder at it, for we had gone up more than forty rapids, had rowed about four and a half Swedish miles, and had been fourteen hours on the way. We hauled our boat on shore, leaving everything in it. I felt somewhat anxious about the satchel containing my money; but my boatmen were apparently not afraid of thieves in that part of the world. After a walk of twenty minutes, partly through a wood of birch-trees and large patches of lichen, we came to a beautiful spot, a sort of oasis in that northern waste, on two little lakes, called Leppäjärvi and Sarjärvi.

The houses, built of fir-logs, were low, with roofs covered with earth, upon which grass was growing; they were far from clean, and the clothing of the people was dirty; two or three of the dwellings were more pretentious, and had small windows. A few nets were drying, and two men were busily engaged in mending them. The buildings were at a considerable distance apart, as a precaution against fire.

Everything was of the most primitive kind — the plates, dishes, and spoons being of wood; pails or scoops were used as drinking-vessels; forks were unknown, or if they had any, they were not used. The only crockery I saw were coffee-

cups. The accommodations for strangers were far from inviting; I preferred a bench to the bed, and my guide and boatmen took possession of the dirty floor.

The season was backward on account of the continued dry weather, and I wondered how the crops could be ready towards the end of August, after which month the frost is sure to appear. This was the last barley I was to see, for we were now above 68° 35′ N., and this grain does not ripen farther north inland. Birch-trees are numerous, and they have plenty of wood to keep their dwellings warm.

The nearest doctor is about two hundred miles away; the church is at Palojoensa, but the people have always at home some religious books, either the Bible, a psalm and hymn book, or *postilla* (collection of sermons). Money is very scarce, and in seasons when the crops fail the inhabitants suffer from want of food; they scrape birch-bark and mix it with flour, or cook reindeer-moss with milk, and, with the addition of flour, make a palatable dish.

This settlement possessed twenty-two cows. One of the cow-houses was a low, long, narrow building, with a roof covered with over a foot of earth, upon which the grass (which is harvested) was now green; the stalls were separated by a wooden partition, and in the rear was a gutter to receive the drainage, for manure here was as precious as gold, the soil being poor; the floor was made of planks; at one end was the usual thick stone structure, supporting a huge iron pot, used to cook the coarse grass, or lichen, for the cattle.

The people were healthy and strong; there were several old people, among whom was a hale old man who had attained the age of ninety years. Men, women, and young girls smoked; but this custom is also prevalent in many parts of Sweden and Norway.

After passing several rapids, and a two hours' pull from Leppäjärvi, we emerged into Lake Palojärvi, from which the Palojoki River flows, having ascended the stream for a distance of about five and a half Swedish miles. Palojärvi is one of the lakes on the slope of the plateau forming the southern water-shed, and is, I think, 1100 feet above the sea; a range of

DESCENDING THE RAPIDS.

sandy hills, covered with shrubs, flanks the western shores; looking towards the east and north-east, I could see a high hill, called Isticconära, which was whitened by large patches of snow. There is something impressive in the solitude and stillness of that northern land, in those silent and lonely lakes, in the murmur of the swift rivers meandering amidst the rocks barring their course, in the wonderfully clear atmosphere, in the pale-blue sky, and in the bracing air. Often was I seized with an indescribable feeling of loneliness, and, at the same time, a desire to wander farther away.

As we crossed the lake I could see only one farm, where a number of long nets were drying. The solitary homes in the far North are generally situated by lakes, which in this latitude swarm with fish, on which and sour milk, during the summer months, the inhabitants principally subsist. A great deal of fish is salted or dried for winter use.

A pull of about half an hour brought us to the northern shore, to a narrow and crooked river—the Rastajoki; ascending it about a mile in a northern direction, we landed.

After two hours' walking through a bleak country, at times marshy, covered chiefly with reindeer-moss and scattered dwarf birches, we came to the shores of a small lake, called Givijärvi, about five miles from Palojärvi, forming the boundary between Russian Finland and Norway. On the way I had seen, at the foot of a rocky hill, large numbers of round stones, ranging from twice the size of an orange to thrice the size of a man's head; they seemed to have been gathered by human hands in the days of old. Since leaving Leppäjärvi I had seen only one coniferous tree; we had now reached the region where these did not grow, but birches were plentiful, though small.

On an island a large patch of snow, which the warm summer sun had not succeeded in melting, reached to the water's edge. Smoke curling above two sharp, cone like huts, showed that it was inhabited. We found a leaky old boat, with which to reach the other side; it was as dry as a piece of cork, rickety and disjointed; happily there was a wooden bucket near, which would serve for bailing. We made a sail with leafy birch branches, and it was all we could do to bail

the water out; I tried to steer with a stick, and the men also paddled with sticks; it took us an hour to make a distance of about three English miles. When we landed, two men, who were watching our approach, came to invite us into the huts we had seen from the other side. These were about twelve feet high, some eight or nine feet in diameter, and built with sods of grass, supported inside by a frame formed of branches of trees. The interior and surroundings were filthy; entrails

LAKE FISHERMEN.

and heads of fish had been cast at random around the place, and two barrels were partly filled with those that had been salted, and their rotten smell was anything but pleasant. The nets which they had been mending were lying on the ground, and were to be set in the evening.

A fire was burning in the centre of the hut, the smoke escaping by an aperture above; large quantities of fish had become mixed with the earth; the beds were made of dirty grass, and the blankets were of sheep-skins, the original white of which had become black with filth. I did not dare to enter. A coffee-kettle hung over the fire, and an old cup was the solitary drinking utensil; their food consisted entirely of fish.

These two occupants of the island were dirty; their shaggy hair, which hung down their necks, protected them from the

mosquitoes, but to all appearance it contained something a great deal worse. They were of medium size, with high cheek-bones, and the type of the face was that of a mixture of the Finnish and Lapp blood; they were dressed in pantaloons, home-spun woollen shirts, and queer-shaped pointed boots; but they were kind, and insisted on my taking a cup of coffee.

From Givijärvi the overland route northward was through a very dreary country leading to Aitijärvi. The walking at times was tiresome, enlivened only by an occasional ptarmigan; lakelets or ponds were seen in every direction.

The mosquitoes had again increased in number, and, although a good breeze was blowing, swarms of them followed and annoyed us terribly. The plateau seems to be the dividing-line for the outlets of the lakes towards the south and north; the birch-trees had become dwarfed, and the bend of their branches showed the force and direction of the winter winds.

Very lonely seemed the station of refuge at Aitijärvi, as we got a glimpse of the buildings from the brow of the hill; in a little less than one hour and a half from the last lake we reached the place.

The farm was intended as a place of refuge, far away from any other human habitation, in one of the bleakest and coldest districts of Northern Europe, the thermometer reaching even 45° below zero; and welcome must be its shelter during the winter, when approaching storms threaten the weary traveller. The house was comfortable and clean; there were two rooms—one for the family, and the other for travellers; the luxuries of soft bedding and fine linen are not to be looked for in that part of the world. Two cows and a few sheep were all the stock on the premises, the reindeer being in the pasturing-ground.

The station is near the small lake of Aitijärvi, and by the banks of the river Sitcajoki, close to the point where their waters mingle; before falling into the lake the stream forms a gentle rapid, below which is a small island covered with grass, the soil having been well manured. The husband and

wife were the only people at home, and they gave us a hearty welcome. Adam Triumf was a nice, queer old man, of medium size, with long black hair, tinged with gray, falling over his shoulders. His wife, Kristina, was quite a sight in her way, with her head adorned with a close-fitting, smooth cap; her long, glossy black hair hung over her shoulders, and, although the wrinkles in her face showed she was aged, she had hardly any gray hair; to complete the picture, she had on a pair of her husband's boots, and both were dressed in homespun garments. They had lived here for twenty-six years, and twelve children had been born to them: one of the sons dwelt with them, but was absent at the time of my visit.

The Norwegian Government pay the old people a stated sum yearly for keeping the place; in winter they are less lonely, as some of their children visit them, and the Lapps come and go. Old Adam Triumf and Kristina had a great deal to do during the short summer, when the long days were chiefly occupied in the fisheries. Large quantities of fish were salted down for winter use; but, besides the fishing, they had to cut and stack the hay, procure wood, and collect supplies of reindeer moss, which latter article is gathered into great heaps, to be taken away in winter by reindeer sledges to furnish winter food for the cattle. Collecting the moss is a very important matter, for that must be done while the ground is free from snow. The dairy likewise had to be looked after, for butter and cheese are among the necessary supplies. Soon after our arrival the wife brought us a large wooden bowl of delicious milk, besides butter and cheese, and a loaf of coarse black bread, just baked, kindly remarking, "You must be hungry."

I asked for a boat; but Adam said that he must first go after the nets and get the fish, which was no sooner said than done. Both the old people left us in entire possession of the house, nothing being locked; they were not in the least afraid that we would help ourselves to the unburned coffee, or the sugar, or the provisions they had brought from the sea-coast. In the course of two hours they came back with a large quantity of fine trout—some of which were from twenty to twenty-two inches long, and would have gladdened the heart of any

angler. Kristina immediately cooked a few of these, and, putting them into a wooden dish, said to me, "Stranger, eat; eat as much as you can; you have a long journey before you." She then refilled the wooden bowl with milk, and made some coffee; when I took leave I put two kronor into her hand.

The weather was getting warmer every day: at nine o'clock the thermometer stood in the sun at 100°; the temperature of the water was 60°, showing that the snow had melted. At eleven, when we stopped to rest, it was 72° in the shade, in the sun 105°; and that of the water, 62°. At one o'clock we again rested, as the men were fairly exhausted: although we were in latitude 67° 30′, the thermometer marked 74° in the shade, and 109° in the sun at noon. This was the second hottest day I had experienced.

On the 5th of July, at one o'clock in the morning, I took leave of Aitijärvi. Adam Triumf saw us off, and wished us a happy journey; he shook hands with me, and said, with hospitable earnestness, "Welcome back!"

Givijärvi and Aitijärvi are on the southern part of the slope we had crossed after leaving Palojärvi, and now the watershed was northward towards the Arctic Sea; and we followed down the streams, over many dangerous rapids, as far as Kautokeino, about four Norwegian miles.

Looking southward, the moon was visible far away; in the opposite direction was the sun. One was pale, and shed no light, the other was shining brightly. The weather was superb, and the sky cloudless; the thermometer marked 57°, and a heavy dew was on the ground.

At the start the river was narrow, not very deep, the average width not exceeding fifty feet; birch woods lined both banks. I had not before heard so many birds singing together after midnight, enjoying the spring, since I left Stockholm. I could not but wonder at the little sleep they had in such continuous sunshine; some days they appeared to rest from eleven to one or two o'clock, while at other times they seemed always active; the swallows, which had reached this extreme northern latitude at this season, would remain in their nests for a couple of hours or so. The trees were short in pro-

portion to their thickness; their leaves were just opened, and the white trunks and drooping branches contrasted beautifully with the fresh green leaves. Vegetation was more backward than on the southern slope, and several patches of snow were seen; one drift was several hundred yards in length, and from it the grass came to the water's edge. The river was as clear as crystal, and, where the water was still, our boat seemed to glide on a bed of greenish glass. As we were carried northward, rapid after rapid was passed, the boat quivering as it shot over the waves. The boatmen knew every bend of the river, all the dangerous boulders and hidden rocks over which the water coursed; they could judge by the appearance of the foaming water whether we could go over safely. Often we passed within an inch or two of a boulder which threatened to dash us to pieces, when, by a skilful manœuvre of the men with their long poles, and just in the nick of time, we escaped, and floated along till another rapid was reached. A mistake or error of judgment would have been fatal. The dexterity of my boatmen was extraordinary. The excitement occasioned by the descent was far greater than that of the ascent of the Muonio.

After a descent of five hours we came to a farm, the first seen on the way; the dwelling was very dirty, though the farmer was well-to-do, and possessed twelve cows and some two hundred reindeer; there were several children, and the family seemed to be of Lapp extraction. I saw on the table a book, which I found to be the New Testament. Around the place were hay-stacks, upon which the hay was placed ten or twelve feet above the ground, to prevent it from being covered with snow, and supported by a number of long poles, some going through the stack, to keep it from being blown away by the wind.

Lower down, after a series of rapids, the stream widened into a small lake, called Suddumælopaljärvi, and, after passing through a mild rapid, we entered the Sopatusjärvi, from which the river throws itself into the Alten, above Kautokeino, which place I reached after a journey of nine hours.

The task was a much easier and more interesting one than

to have ascended the river as far as Karesuando, and then to have made a land journey of about sixty miles, partly over marshes, bogs, and other obstructions. I had walked about three hours only during the whole journey—a distance of about eighty-four miles from Palojoensa.

Kautokeino is near 69° lat.; like all the villages of the Laplanders it is in summer almost deserted; few people are to be seen, as they are in the mountains or fishing, and the reindeer and cattle are in the pastures.

This hamlet had ten or twelve homesteads; the dwellings were built of logs, and those for the cattle either of turf or stones. The live-stock of the place consisted of about fifty cows, one hundred and fifty sheep, four or five oxen, and some two hundred and fifty reindeer, more than half of which had been broken to harness; there were no horses.

It has a parish church, with a resident clergyman during the winter; the district judge holds court twice a year, remaining a week each time; a school in winter is attended by about seventy children.

A Norwegian mile distant is the hamlet called Autzi, with about the same population; beyond are a number of scattered Lapp farms, on the banks of the Alten; the whole district possessing nearly two hundred cows.

The region is now almost denuded of trees, as this is an old settlement, and the people have to go a considerable distance to obtain firewood; large pines and firs were once abundant, as the remains of trunks and roots found in marshes testify, but they have now entirely disappeared.

The village-store was used as an inn, but the merchant had gone on his summer vacation, as there was nothing doing at this season, and his house-keeper, with a servant-maid, had charge of the establishment.

There is a resident *lensmand*,* whose duties are those of a sheriff; he has to see that the laws are executed, and, in such a small place as this, he has prisoners in his custody. A room in his house, with iron bars to the window, is the prison,

* *Lensmand* is the Norwegian form of the Swedish *länsman*.

but it is seldom occupied; it would not take long in America, or in most countries of Europe, for a prisoner to break through such weak barriers and escape; but here, as a rule, people are awed by the majesty of the law. With two Lapps under him, acting as policemen, he has charge of the whole district. Both he and his wife received me with great kindness, and it was an agreeable surprise to find that the husband could speak a little English.

Near his house was the garden, where radishes and turnips were growing, and these attain a good size. Potatoes here are very small, their vines growing so rapidly that the tubers have but little chance to develop, and it is not every year, therefore, that he can enjoy the luxury of this esculent; the same may be said of pease, which, however, had yielded well the previous year. Barley is sometimes grown, but has to be cut before it is entirely ripe; it is so very uncertain that the people rarely plant it; the hay crop is often very abundant.

The summer is very short; the Alten River freezes sometimes in the last days of September, and the ice breaks up only at the end of May or the beginning of June.

I concluded to send Josefsson back, as I foresaw the difficulties he must encounter on his return, if I took him farther away from his home.

On the 7th of July the weather was sultry and oppressive, and a violent storm burst over us; the claps of thunder were very loud and the lightning vivid, and a heavy rain poured down for four hours. This was the third shower I had encountered since I landed in Scandinavia; all were within the arctic circle, and two had been accompanied by thunder. After the rain the wind changed, and the mercury fell from 78° to 47°—a difference of 31° in a few hours.

Two guides—brothers—were provided for me by the lensmand, regular postmen between the hamlet and Bosikop; their names were Mathias Johannesen, and Johannes Johannesen Hætta; the distance between the two places is about eighteen or nineteen Norwegian miles.*

* A Norwegian mile is 6.91 English miles, consequently somewhat longer than

The banks of the Alten near Kautokeino are of fine white sand, sometimes of clay, the district having evidently been once the bed of a lake. The ground, in many places, is covered with a spongy wet moss. The river runs nearly due north, passing through a hilly and mountainous country, its course impeded by rapids, which make its navigation farther down the stream impracticable; so that the journey to Bosikop on the Alten fjord has to be made by water and by land.

The stream became wild as we approached the first rapid; our voices were almost drowned at times by the noise of the dashing waters. As we were swiftly borne along, I heard the booming sound of a water-fall. I confess I felt somewhat anxious, for I had not as yet been able to judge of the skill of my boatmen, and thought we had come to a dangerous place; in the mean time, as a not very cheering reminder, they said that three men had been drowned here in the year 1858. Suddenly we shot into a sort of eddy at a bend of the river, and made for the shore, and it seemed to me none too soon. Indeed, at no great distance the river plunged, with one leap, over a ledge of rocks, twenty to twenty-five feet: the rushing water was confined on both sides by walls of solid rock. The fall was called Njejdagorze. We hauled the boat overland to below the falls. After passing another rapid, and a descent of nearly five hours, the river became lake-like in appearance, called Ladnejärvi. On its banks there was a shelter station for the postmen and travellers going to and from Kautokeino and Alten.

Having been fifteen hours on the way, we stopped at a small log-house built by the Norwegian Government. It was about eighteen feet long and twelve feet wide, banked with turf all round at its base to prevent the wind from penetrating; the roof was covered with earth and sod. In a corner was an open fireplace, and there were two beds made of boards. Some clothes were hanging on a pole inside, and food had been left by some persons for their return journey: no one would dare to help himself. The little place was surrounded by

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the Swedish. The Norwegian and Swedish mile is 36,000 feet; the Swedish foot, 0.974 English foot; the Norwegian foot, 1.029.

birch-trees, which supplied the travellers with fuel, and a water-fall was close at hand. We found some wood ready for use.

For the first time since I had left Stockholm I felt perfectly exhausted from want of sleep. During the journey down the river I kept awake in order to see the country, and while eating fell asleep with food in my hand. I had slept only two hours at one time and five hours at another from 9 A.M. on Wednesday to 4 P.M. on Saturday. We made a thick smoke to drive the mosquitoes out, shut the door, and fell into a deep slumber of four hours' duration.

We collected firewood to replace that which we had burned, as is customary, so that the weary traveller may find fuel ready on his arrival; when we got ready to leave, we poured water on the fire to extinguish it, and then locked the door with a wooden pin.

As this was the end of the water journey, we climbed the steep, birch-clad banks, and reached gradually an undulating plateau, barren and desolate, with the ever-present massive boulders scattered over the surface. Lichens were abundant, and, though we were in the second week of July, the dwarf birches and willows were not yet in leaf at this altitude.

The sky was clear, and the mercury had fallen to 45°; the ponds were still covered with ice, and patches of snow were seen in the distance. The walking was good, the ground hard, and we could easily have ridden on horseback. Coming to a tract of snow, which we had to cross, the faces of my Lapps brightened; they threw themselves flat and rolled in it, washed their hands and faces, and eating it, thus showing their joy and love of winter.

We were nearly two thousand feet above the level of the sea, and were still slowly ascending. Four hours after leaving the station of refuge we came to the foot of a high rocky hill, standing by itself, and towering above the plateau. It was called Lodigen, or Nupp Vara, 2650 feet above the sea. From its summit, where I waited for the midnight sun, the view was weird and solemn in its dreariness. In sight were lakes, frozen and unfrozen, while in the distance appeared the peaks of

snowy mountain ranges; the rocky surface was covered with boulders, and gray with reindeer-moss. The brightness of the sun was gradually fading, and his last mellow rays rested upon the mountain-tops, turning the patches of snow into rose-tint, and casting their reflection upon the sky above. There was in the scene an impressive air of repose.

Even at this height, with the mercury at 44°, the mosquitoes were terrible pests; it was impossible to imagine whence they came, for their swarms certainly had not been produced in the frozen lake near the foot of the hill. They were so numerous, and attacked so fiercely, that I could hardly make my observations; I broke an aneroid barometer and two thermometers, which dropped from my hands while I was trying to defend myself from these minute persecutors.

The effect of the atmosphere upon me beyond a certain height, which varies according to the latitude, was remarkable. I felt as light as a cork, and as full of life and spirit as if I had been exhilarated with champagne; the rarefied air acted upon me like a stimulant, and my men looked at me with astonishment, acknowledging that I could beat them in walking. I have had the same experience on the mountains of Southern Norway; there were days when it seemed as if I could not get tired. In no other country have I been able to undertake such long marches as in the mountains of Scandinavia.

In such barren solitudes the sight of man is strangely welcome, and we met with singular pleasure the two postmen who carried the mail to Kautokeino. Continuing our way, and passing over a wet dark soil, sinking at times almost knee-deep in the mire, we came into a verdant valley—a wonderful contrast to the dreary country we had left—where rills of clear water poured from the sides of the hills, where the grass was green, and violets, buttercups, and dandelions were interspersed with the lovely forget-me-not. The birch-trees were quite large; I measured two fir-trees by the side of the path, one of which was seven and the other a little more than nine feet in circumference near the ground; but they were not nearly as tall as those growing farther south.

I could hardly believe I was so far north, the birds were

so numerous. Here one meets the *Sylvia hortensis* (garden warbler), *Fringilla cœlebs* (bullfinch), and others of the finch family; *Turdus pilaris* (mountain thrush), several species of *Parus* (titmouse), *Alauda arvensis* (common skylark), *Luscinia suecica* (blue-throated warbler), *Motacilla flava* (gold-hammer); some varieties of fly-catchers (*Muscicapa*), the cuckoo, sparrow, and swallow; *Plectrophanes nivalis* (snow-bunting), *Garrulus infaustus* (red jay), the woodpecker; *Pica caudata* (magpie), *Corvus corax* (raven), and *Corvus cornix* (crow), *Ampelis garrulus* (waxwing), and *Loxia curvirostra* (cross-bill). The *Cinclus aquaticus* (dipper, or water-ouzel) is a high northern singer, which is found principally by the mountain streams, near the snow boundary, and only goes down into the valleys to breed.

Twelve hours after leaving Ladnejärvi we found ourselves at Wind, on the banks of the Alten, a few miles from the sea, and were now but a short distance from latitude 70°.

After refreshing ourselves at a farm we took a boat, and, after a pull of two hours, landed, and ascending a high hill, where we found a carriage road, we walked towards Bosekop, at the head of the Alten fjord.

Suddenly I discovered that I had forgotten my satchel, which had been left at one of the stopping-places. By pantomime I tried to make my Lapps comprehend the nature of my mishap; they looked at me in amazement. I was quite anxious, for I had not a single copper with me; my letters of credit and introductions to Hammerfest were also in the missing bag. I had little doubt that the people were honest, but I felt that they were liable to temptation, and that even here the people might sometimes steal.

If, in spite of all my endeavors, my guides could not be made to understand what I meant, there was no alternative but to go back. My anxiety had been so great that I had not noticed that while making all these pantomimic gesticulations I had been walking past a farm-house, from which a gentleman and three ladies—a mother and her two daughters—came towards me. One addressed me in French, and the others in English and German, asking politely if they could do any-

thing for me. I looked at them in amazement, astonished to hear the English tongue so well spoken in that far northern region. I explained what had happened.

"My father will send a man on horseback to fetch your satchel, for your men say they are so very tired," said one of the young ladies in very good English. "You will get the bag; you must not be afraid; it will be all right."

I was invited to enter the house, but tried to excuse myself, as I was covered with mud. "Never mind; come in," was the instant reply; and I accepted the hospitality so cordially offered.

The dwelling reminded me of that of a well-to-do farmer in the United States. In the parlor were books and a piano; the furniture was plain and comfortable, including a sofa, an article almost always found in the homes of the more refined class in the country; at some of the windows hung coquettish but simple little curtains, while roses and other flowers were blooming and basking in the sunshine. Everything indicated culture and refinement, and I felt myself even more unpresentable than at first. I had not recovered from my astonishment, having expected to meet only rude people in these parts, and here I was brought face to face with education and good-manners, and three foreign languages had been spoken in my hearing.

My host was a member of the Storthing (the Norwegian Congress) for Vestfinnmarken, and he and all his family gave me a most hearty welcome. An invitation to dinner was urged so pressingly that it could not be declined.

Bosekop is composed of scattered farms, with a church, a school, several stores, and a comfortable inn, owned by an elderly widow and her daughter; it is the seat of a fair, and in winter is a place of great resort for the Laplanders; court is also held here.

There is a small society of educated people, comprising the families of the judge, storthingsmand, clergyman, and others. My arrival was on Sunday afternoon, which is used by the Norwegian as a time of recreation and rest. After dinner two young ladies called, who invited me to join a social gathering

of the young people. We all started together, and went to the inn where my luggage had gone. When I came down-stairs, dressed in my best (that is not saying much), I found in the parlor a dozen blooming girls and a few gentlemen waiting for me, to whom I was introduced. My guides wished to go back, and wanted their pay; a cloud came over my face, and I had to explain that they must wait. A gentleman offered to advance the required amount; but the men had scarcely been paid when the good farmer's wife made her appearance. She had walked all the way to restore the lost bag, not caring to intrust it to any one else, for she believed that it contained a large sum; she refused to accept a reward when I offered it, saying that she did not want to be paid for being honest, but I at last prevailed upon her to take a present.

All the company could speak English, and some French and German besides. In a short time the friendly manners of all made me forget that I was a stranger.

The day after my arrival several ladies called upon me, and courteously invited me to their houses, saying that they wished me to have a pleasant time, and to preserve a kindly recollection of my visit to Bosekop.

I was fortunate in meeting here with Professor Theodore Kjerulf, of Christiania, one of the most distinguished *savants* of Scandinavia, whose works on the geology of Norway will insure for him an enduring fame, and who was then engaged in examining the formation of the country. He was somewhat astonished at the paucity of my luggage, which consisted, as he said, chiefly of writing-paper and maps. My shoes also attracted his attention, on account of their thin soles; for forced marches, where I have to walk fast, and where the ground is not too stony and wet, I always prefer such.

After a pleasant conversation we went into a little garden, in which there was a pavilion ornamented with leafy branches of the birch, and containing a table covered with refreshments. Eggnog, lemonade, and cakes were handed round, and a game of tag was started, while the elders came out to look at the fun. We played till we were tired, and then adjourned to the large room of the hotel to enjoy the sport of blind-man's-buff.

I succeeded in persuading the learned professor to join in the amusement. The game is played in a curious way: all who take part in it are seated on chairs in a circle; the blindfolded person, placed in the centre, goes around trying to seat himself on some one's knees. When seated, his hands must be folded, that he may not touch anything with them; all disguise their voices, and he guesses the name of the person on whose knees he is sitting; if he does not give the right name, he must start again around the circle; and so the play goes on. Here, as in other countries, the marriageable young people enjoy this game greatly. There is much fun in a game of tag when the reclaiming of the forfeits takes place, and many ways to tease a suspected lover or sweetheart, in telling what one must do to redeem forfeits, and in showing preference for one without letting others notice it. I liked the game amazingly. At 11 P.M., the sun shining brightly, they bade me good-night, and went to their homes, leaving me full of admiration at their simplicity, innocence, and gentle manners.

I was made welcome in every family I visited, and gave an entertainment to the young ladies, who had invited me to theirs, in the parlor of the hotel. Suddenly there was a pause, and all the guests looked at each other and whispered; some of the ladies, headed by Professor Kjerulf, came towards me, and asked, in the name of the company, if I would be kind enough to tell them something about my travels in Africa and the gorillas. I had never uttered a word about my explorations, and felt sorry to have been recognized: this is one of the disadvantages of bearing an unusual name. It was impossible to refuse; and there, in 70° of north latitude, in the quiet parlor of the hotel at Bosekop, I delivered a lecture on the equatorial regions of Africa, and on the gorilla, before as pleasant an assemblage of people as one would wish to meet; and, as the newspaper wishing to compliment a lecturer with a small audience would say, the address was delivered before a select and very distinguished assembly.

Not very far from Bosekop, on the Kaa fjord, is a copper mine, the most northern mine in the world which has been

successfully worked, producing metal of the best quality; about five hundred persons were employed on the works. Within the last five years many of the miners had emigrated to America, wishing to try their fortunes in the New World, led by two of their fellow-workmen, who had come back with glowing accounts of the good pay. The mine belonged to an English company, and the manager, an Englishman, had been here forty-three years, which spoke well for the climate. The miners were Finlanders, receiving an average pay of forty to fifty cents a day; many were married, and had large families. The manager told me that he had promised to stand godfather to the twentieth child of a woman from Pajala; but she stopped at number nineteen, and died at the age of seventy.

Even here Englishmen had come to fish. The Duke of Roxburgh, who holds the Alten River to himself, leaves his estates every year to enjoy the pleasure of sleeping in a log-house, catching salmon, and being eaten up by mosquitoes. The people spoke of him with respect and love, and praised his kind heart and genial manners; they said the poor were never sent empty-handed from his house, and many a needy family had been the recipient of his bounty; I know of no other Englishman more esteemed in Norway. He has been fishing here for twenty years, and is known in many parts of the country. In an evil hour the good duke was robbed by the son of his house-keeper, to the great sorrow of the people of the region, who, it seems, are not wholly exempt from the evil of thievery; the amount taken was, I believe, about two thousand dollars, of which nearly all was recovered; the thief had never before seen so much money, and did not know what to do with it, and the sight of so many bank-bills scared him.

THE ALTEN FJORD.

There is no part of our globe where vegetation is so thriving *at so high a latitude* as on the Alten fjord. At the Kaa fjord, an arm of the Alten, and near Bosekop, rhubarb, barley, oats, rye, turnips, and potatoes grow well; carrots attain a length of from five to seven inches; garden strawberries ripen at the end of July or the beginning of August, if the season

is a warm one; currants thrive well, and the blackberries mature in one year out of three or four; pease bear every year; I found these last from ten to fifteen inches high on the 10th of July, having been planted about four weeks, and ready to blossom. The grass is rich, and four gallons of milk yield, on an average, a pound of butter; oats or barley are harvested in nine or ten weeks after they are planted.

The hottest season is from the beginning of July to the middle of August, the thermometer sometimes rising to 85°. The weather at Bosekop had become cooler, the warmest temperature during my stay being 63° in the shade, the coolest 55°.

The usual way of going farther north is by taking the weekly steamer from Bosekop to Hammerfest.

The scenery on the Alten fjord is often superb; there are numerous raised beaches and sea-markings on the solid rocks, high above the present water-line; two of the latter are very distinct at a place called Kvæn Klubben, being about twenty and fifty feet above the sea-level. Weird, indeed, is the sight at times, from the dark masses of rock which line the shores, and the general dreariness of the landscape.

The steamer stopped at a number of places; then, leaving the fjord, we passed between the islands, and, after a run of thirteen hours, reached Hammerfest, on the north-western extremity of Kvalö, an island near the main-land, in latitude 70° 40′, said to be the most northern town in the world.

These Norwegian seaports are hidden by high mountains or hills, and generally come suddenly into view. I was surprised to see in so high a latitude such a thrifty commercial town, there being more than fifty vessels, chiefly schooners, lying at anchor. English, Russian, Norwegian, Swedish, and German flags were represented; two steamers were ready to leave; here was an English vessel unloading coal, and a Russian vessel from Archangel discharging flour in sacks; others were taking cargoes of salted or dry codfish, cod-liver oil, etc.

Boats, lighters, and little fishing-craft lay at the wooden wharves, near or upon which the warehouses were built; the port is sheltered, and shipping rides in safety; the town has

a population of about 2500 inhabitants. Wandering through the streets or along the wharves one sees Russian captains, with their long beards; fishermen and sailors; Finlanders and Norwegians dressed in the most approved style of fashionable cities, for the crinoline, chignon, and "stove-pipe" hat had made their way here.

There are few towns in the world, if any, built upon a spot more barren, or surrounded by such a dreary, desolate landscape; not a tree is to be seen, but only bleak, dark rocks. No road leads out of the place, for there are no farms to be reached, and no wood to be brought from the surrounding country; the streets are narrow, the principal one following the bend of the bay; some of the dwelling-houses are large and commodious, and there are a considerable number of warehouses of different sorts and sizes.

The stranger is disagreeably affected by the fishy odor which pervades the town, for the inhabitants manufacture cod-liver oil, chiefly of the brown sort, and the smell and smoke are by no means pleasant; but, as one of the leading merchants observed, the smoke that brings money is never unpleasant. A considerable number of cows are kept, which are fed on fish, reindeer-moss, and hay.

The port is never closed by ice, for the Gulf-stream laves the bleak and desolate coast, which at certain seasons of the year swarms with fish; if there were no fishing there would be no Hammerfest. Its geographical position is excellent; it is in direct telegraphic communication with Christiania, and thence with the rest of the world; it has three newspapers, and a small hotel, which furnishes comfortable rooms and a fair table. The schools are good, and attended by all children, as education is compulsory.

There is an American vice-consul resident at the port. Immediately after my visit to him the Stars and Stripes were hoisted over his residence, and I found, to my astonishment, that my name was known in this remote part of the world; for my "Equatorial Africa" had been translated into Norwegian, which was shown to me, and also the original in English. I was fortunately provided with letters of introduction

to one of the leading merchants, Herr F——, who introduced me to his friends, and I was made welcome in several homes, and not the least at the house of the American vice-consul.

The people live very comfortably. There is a great abundance of fish, one of the chief articles of diet; beef and mutton come from the fjord Tromsö and the adjoining southern province; in winter, game and reindeer meat are abundant. Coffee, tea, spices, and other luxuries find their way here; and dinner-parties are given which would do credit to many a place less distant from the centres of civilization.

Wood is dear, as it has to be brought from the surrounding fjords; but the people burn a great deal of coal, which comes from England, and which that year cost only five dollars a ton, a cheapness which surprised me.

All this northern part of the coast of Norway is accessible both in summer and winter. Steamers come to Hammerfest from different cities along the coast, and from Christiania, the voyage taking a fortnight, as the boats stop at many places, and the distance is over two thousand miles. There is also a semi-monthly line of Norwegian steamers from Hamburg; these boats, being the largest and most comfortable, are generally taken by tourists who wish to see the coast scenery or the midnight sun; this line brings miscellaneous goods, and in return takes Norwegian produce, and has been in operation for a number of years.

Towering hills, the highest of which rises 1335 feet above the level of the sea, form the background, and leave hardly any room for the town to grow; their crests seem wonderfully sharp, and some of the boulders resting upon them appear to be so nicely balanced that a slight push would hurl them down the slopes.

Looking towards the land, I could see little lakes scattered everywhere over the dreary waste; in the distance are the weird, barren islands of Sörö and Seland, the latter rising 3408 feet above the sea, and having the most northern glacier of Norway. From the top of the hills the midnight sun can be seen as late in the season as on North Cape, but the scenery is not so impressive.

CHAPTER VIII.

Island of Magerö. — Gjæsver. — Filth of the Fishermen's Houses. — Charming Northern Home. — Carnivorous Cattle. — Rainy and Changeable Weather. — Verdant Fjord. — Ascent of North Cape. — View from the Top. — Desolate Landscape. — A Bird Wanderer. — The Midnight Sun.

THE island of Magerö forms the most northern land in Europe, and is separated from the main-land by a deep channel — Magerösound — more than a mile wide. It is an elevated plateau, with very abrupt sides, and indented with well-sheltered bays and fjords, the greatest altitude being about 1700 feet above the sea; North Cape is its northern extremity. In order to see the midnight sun from its summit, one should land either at the fishing-station of Kjelvik, or, what is still better and easier, at Gjæsver (*gjæs* being the Norwegian word for "geese"), which belongs to a group of small islands lying near, on the west side of Magerö, and with a boat land near the cape, when the weather permits.

On the 21st of July, a little after midnight, in the midst of a pouring rain, accompanied by the American consul, the collector of the port, and Herr F——, I made my way in a small boat to the steamer. These gentlemen wished to recommend me specially to the captain, and make some requests in my behalf. The passage was anything but agreeable, the weather being misty and rainy, and the thermometer at 45°.

Four Russian vessels from Archangel were at anchor before Gjæsver, waiting to take in their cargoes of fish; our steamer was obliged to cast anchor on account of the strong current. Passengers, mails, and merchandise were huddled together in a boat; and the entire population then on shore, numbering in all about twenty souls, awaited our landing, eager to hear the news. This settlement was composed of a few fishermen's

houses. The surroundings were anything but attractive; entrails of fish, barrels of liver, blood, and filth were all around, and the combined stench was very offensive. Inside the huts there was an appearance of slovenliness which I had not before seen; instead of fireplaces there were stoves, as economy was observed in the use of fuel. A single apartment served for the sleeping-room of the whole family, the beds and coverings being made of the down of the eider-duck, sheets seeming to be unknown articles. There was a merchant on the island, and his house was in pleasant contrast to the others; cleanliness, comfort, and taste were apparent everywhere; in one of the parlors was a piano, and newspapers and books were on the table. The hostess, whose husband was in Hammerfest, and to whom I had a letter of introduction, received me with great kindness.

It was a pleasant picture of home — one which a stranger would never dream of meeting in such a place — and many such are found on this most barren coast of glorious old Norway. Around the house were the various out-buildings required for storage of wood, fish, and provisions. There were five small cows, measuring only from three feet two inches to three feet four inches in height; there were a few sheep and many goats, the latter thriving on the grass which grows between the rocks; but, as the pasture was not sufficient, they were fed twice a day on *fish!* I was amazed when, for the first time, I saw cows, goats, and sheep flock around a tub filled with partly cooked, and often raw pieces of fish, and devour the mess in a most voracious manner. It would be interesting, from a Darwinian point of view, to ascertain whether the feeding of herbivorous creatures on animal substances year after year, for a considerable part of the time, would tend to modify their digestive apparatus—whether the molars would be rendered narrower and sharper, and canines and upper incisors would appear—whether the first three stomachs of the ruminating animal would be less developed, and the fourth become like the digestive stomach of the carnivorous or omnivorous creature—and whether the long intestinal canal belonging to the ruminant would approximate to the short in-

testine of the quick-digesting carnivora. During the fishing season great numbers of fish-heads are dried, and kept for the cattle for winter use, and are cooked before being served to them.

Even here magpies, apparently quite tame, were flying around, but swallows were not to be seen; ducks and gulls were innumerable.

The beautiful weather that had followed me as far as the Alten fjord had now come to an end. The chances of the tourist who comes in such a high latitude to see the midnight sun are often not very great, and rough seas, snow-storms, rains and fogs occur in winter, while in summer there are alternate days of warm sunshine, rain, mists, cold winds, and fogs; as a rule the summer climate is uncertain, the north and north-east winds bringing fog and wet weather. That year, from the 11th to the 23d of July, there were only two dry days, two with alternate sunshine and rain, and the remainder either stormy, foggy, or misty, with often a heavy sea.

The warmest temperature had been at Hammerfest, where the mercury rose to 59°, and that on only one day; the average since had been from 44° to 45°, and at Gjæsver it was several times as low as 41° and 40°, the variation being not more than 5° during the day. I began to fear that after all I should not see the sun at midnight from the North Cape, on account of the cloudy and stormy weather.

On the 20th of July the boat was ready. The morning was charming, and even this bleak landscape appeared smiling in the rays of the sun, which had been hidden for several days; the sea was of a deep-green color, not very salt, and so clear that the sandy bottom could be seen at a great depth; the cliffs, which from a distance looked abrupt, now appeared to fall into the sea at an angle of from 30° to 40°. Immense numbers of gulls were flying over our heads, probably taking us for fishermen; ducks were also numerous, and many of them shy, but the eiders seemed to be aware that no one would molest them, shooting them being forbidden.

The island of Fruholmen, 71° 5′ N., towered above the water as we entered a little fjord on the west of Magerö, leaving

THE NORTH CAPE. From a Photograph.

to the northward another one which lay opposite the entrance; and, when we reached the head of the fjord, there was a remarkable change in the entire aspect of nature. As we landed I saw thick green grass, dotted with buttercups and dandelions, violets, and forget-me-nots, with stems more than a foot long; the dwarf birch and willows were abundant, as also the plantain (*Plantago major*). I had seen the last-named plant everywhere in my journeyings in Scandinavia, but was surprised to find it so far north; I think there is no other which has a wider range of latitude; I found it common under the equator in Africa; it was flourishing at 71° north.

Springs and streams seemed to burst from the earth, and the rays of the sun poured warmly down into the narrow dell, which is the greenest little spot to be found anywhere so far north; even a few small birds had found a home there.

The ascent was often so steep that I was obliged to stop several times before gaining the summit, in order to take breath; the thermometer indicated 48°, and climbing was warm work. From the top I could see our little boat, diminished to a mere speck in the distance; two of the men had remained on board, while the other three accompanied me. There was no path, but the walking was generally good, the soil being hard and stony; we passed several little streams, and thick patches of snow, the remains of former drifts, and a number of small ponds still covered with floating ice.

After a walk of several miles I stood upon the extreme point of the North Cape, in latitude 71° 10′, nine hundred and eighty feet above the sea-level. This bold promontory is a huge mass of mica-schist, rising dark and majestically from the sea.

Before me, as far as the eye could reach, was the deep-blue Arctic Sea, disappearing in the northern horizon; it was as quiet as the wind, which hardly breathed upon it, as if fearful of arousing its wrath, and disturbing one of the rare, bright, and lovely days of that cold North, which once enjoyed a climate as temperate as that of England at the present day. I could not see the sun, for at that time of day its course was at my back, that is, southerly from where I stood.

Far beyond was that unknown region, guarded by a wall of ice, which bars all approach, and has baffled the efforts of all who have tried to unravel its mystery and to reach the north pole; behind me were Europe with its sunny climes, and Africa with its burning deserts and malarial swamps—on my right was Asia—on my left was America—misnamed the New World.

Wherever I gazed, I beheld nature bleak, dreary, and desolate; grand indeed, but sad. The ground was covered with fragments which had been riven from the rocky strata by the action of frost and time; not a human habitation or tree was in sight; the immense cliffs all around bewildered me. On the western side of the cape were four large fissures in the rocky walls; beyond, the land formed a cove, the opposite side of which was comparatively low and rounded, sloping gently to the sea; there was a rocky islet, upon which the surf was dashing, and upon its shores lay stranded the trunks of two large trees, which the waves were trying to recapture—perhaps they had grown in the New World, and had been floated hither by the Gulf-stream. Projecting still a little farther northward is Knivskjælodden, but it lacks the grandeur of the North Cape; there was also in view a high, indented, and a precipitous line of coast, which appeared to arise abruptly from the sea; while far off, and the last land that could be seen, was Cape Nordkyn, the most northern point on the mainland of Europe. All along the shore the waves were beating incessantly against the rocks which opposed them, and, as they dashed against the base of the cliffs, were broken into a continuous white fringe.

It is only from a distance that the cape itself, like the coast, seems to be vertical; skirting the shores in a boat the appearance of the promontory is much changed; as the engraving shows, the point falls into the sea with a gradual slope.

A sad repose rested upon the desolate landscape, which has left an indelible impress upon my memory; I would have left then, for a feeling of oppression had seized me, which I tried in vain to shake off; but I had travelled a long way expressly to see the midnight sun for the last time from the

summit of that grand cliff, the terminus of Northern Europe; and for this I had nearly ten hours to wait.

Taking my mineralogist's hammer, I went to the extreme point of the cape, which for a distance falls abruptly—lying flat on the ground, to look over the edge of the cliff, and, while one of my guides kept firm hold of me, I succeeded in breaking off a fragment of the solid mica-schist rock, to be preserved as a memento of my journey.*

I thought of the winter season, and how terrific must be the tempests which then sweep over the cliff; how the winds must whistle, how thickly the snow must fall, and how furiously the ocean must beat against the gigantic walls which oppose it, dashing its waves into immense masses of spray.

The weather, even on this beautiful summer day, was cold, although the sun was shining brightly; the thermometer at 2.30 P.M. stood at 46°. The sun was so pale that it looked almost white, and the sky was of a hazy bluish tint, shading off into white towards the horizon.

Back of the extreme point of the North Cape, and sloping gently towards it, is a knoll a little higher; then comes a depression crossing the whole breadth of the promontory from east to west, and connecting with the two coves on each side. The second range of hills is more stony than the first, with a morass, stream, and a pond, and here the grass, being sheltered, was green, and wild flowers grew; the third range is still more rocky than the second, and was covered with patches of snow. On the very end of the Cape a few blades of grass were sprouting.

A little farther inland the dwarf-birch makes its appearance, growing larger when sheltered, but so small at first as to be scarcely visible, in the former case attaining a length of about a foot, with a diameter of from a quarter to a third of an inch, requiring a generation or two to reach those dimensions; it did not raise its top towards the sun, but crouched to the earth, clinging to it like a creeping plant, to escape being torn

* On my return to Christiania, my friend, Professor Kjerulf, asked me for a piece of the rock, to be deposited in the museum of the University.

away by the force of the winds. Many a time since, while crossing mountain ranges, I have observed the same phenomenon.

As I walked to while away the time, south of the cape, I saw a spider, a humblebee, and a small bird; I brought my gun to my shoulder, intending to shoot and preserve it as a memento of the North Cape, but, when the little creature fluttered down, I had not the heart to take its life. It flitted from spot to spot, its shrill cries showing its anxiety; evidently it was not at home. I said to myself, "I will not kill thee; for thou, like me, art a wanderer in these far-off northern climes." The thought had hardly passed in my mind when it soared upward, and took its flight towards the south.

I began to grow anxious, for during an hour or more a bank of clouds had been gathering from the east to the south, slowly rising higher and higher; at eleven o'clock a great portion of the sky was overcast, but towards the north it was still clear; and, if the black mass did not advance too quickly in that direction, I could yet see the sun.

Lower and lower the sun sunk, and as the hour of midnight approached, it seemed for awhile to follow slowly the line of the horizon; and at that hour it shone beautifully over that lonely sea and dreary land. As it disappeared behind the clouds, I exclaimed, from the very brink of the precipice, "Farewell to thee, Midnight Sun!"

I had now seen the midnight sun from mountain-tops and weird plateaus, shining over a barren, desolate, and snow-clad country; I had watched it when ascending or descending picturesque rivers, or crossing lonely lakes; I had beheld many a landscape, luxuriant fields, verdant meadows, grand old forests, dyed by its drowsy light; I had followed it from the Gulf of Bothnia to the Polar Sea, as a boy would chase a will-o'-the-wisp, and I could go no farther.

I now retraced my steps to where we had left our little boat. The men were watching for us; it had begun to rain, and, when we got back to Gjæsver, I was wet and chilly, and my feet were like ice. I was exhausted, for I had passed two-and-twenty hours without sleep, but to this day I have before me

those dark, rugged cliffs, that dreary, silent landscape, that restless Arctic Sea, and that serene midnight sun shining over all; and I still hear the sad murmur of the waves beating upon the lonely North Cape.*

I shall return to these northern regions in winter, to wander with Laplanders and reindeer over snow mountains and along frozen valleys and rivers, to see the coasts lashed by tempestuous seas and enveloped in blinding snow-storms.

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* The following tables give the dates of the appearance and disappearance of the midnight sun within the Arctic circle:

THE CONTINUOUS NIGHT.

Where the Sun is last seen.		Where the Sun is first seen.	
Bodö	December 15	Bodö	December 28
Karasjok	November 26	Karasjok	January 16
Tromsö	" 25	Tromsö	" 17
Vardö	" 22	Vardö	" 20
Hammerfest	" 21	Hammerfest	" 21
North Cape	" 18	North Cape	" 24

THE CONTINUOUS DAY.

Where the Midnight Sun is first seen.	Upper Rim.	Half Sun.	Whole Sun.	Where the Midnight Sun is last seen.	Whole Sun.	Half Sun.	Upper Rim.
Bodö	May 31	June 2	June 4	Bodö	July 8	July 10	July 12
Karasjok	" 19	May 21	May 22	Karasjok	" 21	" 22	" 23
Tromsö	" 18	" 19	" 20	Tromsö	" 22	" 24	" 25
Vardö	" 15	" 16	" 17	Vardö	" 26	" 27	" 28
Hammerfest	" 13	" 15	" 16	Hammerfest	" 27	" 28	" 29
North Cape	" 11	" 12	" 13	North Cape	" 30	" 31	Aug. 1

CHAPTER IX.

Blending of Sunrise and Sunset.—Bodö.—Across the Scandinavian Peninsula.—Venset.—Saltdalen Valley.—Rognan.—My African Travels in Norwegian.—Simple and Contented People.—Primitive Race.—Deserted Hamlet.—Hospitality.—Village Maidens of Almindingen.—Family Dinner.—Storjord.—Legends of the Coast.—Kvæn Precipice and Dead Man's Bay.—Arctic Thunder-storm.—Lang Vand.—Scandinavian Fleas.—Skjönstuen.—Fagerli.—Larsen's Farm.—Candy, Coppers, and Kisses.—Grist Mills.—Preparations to cross the Country.—My Luggage and Provisions.

In the latter part of July I found myself sailing along the wild and superb coast south of Tromsö. At eleven o'clock the color of the clouds began to change to a golden tint, warning us that the midnight hour was approaching, and the sunset close at hand; soon they became of an intense red, while the sun was hidden from our view; and then they again changed their color, gradually becoming brighter, as if new life had been infused into them; when they were tinged with the hues of the rising sun the glow of the sunset was mingled with that of sunrise; the morning and the evening twilight were blended into one. The mountains and hills in the east assumed a rosy tint, which was strangely contrasted with the darker bases, and the calm blue sea reflected the images of land and sky, and, as the day advanced, the clouds changed into a fleecy whiteness.

The next day I landed in the town of Bodö—lat. 67° 20′—a small port on the coast of Norwegian Nordland. The place has an unfinished appearance, and derives its importance from the fisheries; it is a regular coaling station for steamers to Hammerfest. The church is very old, built of stone, and the Catholic altar is still retained; there are some queer paintings and coats of arms of Danish people, who are now forgotten; on the outer wall is a slab, with the date 1596–1666. Though

the town has only a few hundred inhabitants, it has its newspaper, and is the residence of the *amtmand* (governor of the province).

My object in coming to this place was to cross once more, if possible, before the summer was over, the peninsula of Scandinavia, and reach the town of Luleå, 65° 40′ N., in Sweden, on the Gulf of Bothnia, thus traversing one of the wildest and most uninhabitable districts of Sweden and Norway, and so skirting the grand glacier of Sulitelma. I had been furnished with a letter of introduction to one of the principal merchants, informing him of my plans, and requesting him to do all he could to aid me, and it proved of great service; I was not long in making friends among the kindly and hospitable people, who received me as one of their own kin.

With the exception of a commission of Swedish and Norwegian officials, appointed several years ago to settle the boundary between the two countries, I was the first to attempt this journey. For the greater part of the way there were no roads or even paths; the country was very wild, and for long distances wholly uninhabited; it would be necessary to find, at the head of the fjords, some of the mountain Lapps, who in summer cross the ranges from Sweden with their herds, and come down towards the coast, visiting the farmers on the way. Herr K—— decided that I should go by that route, and stop at a place called Venset, as one of his cousins lived there, and confer with him as to the best mode of performing the journey.

None should undertake the task of crossing the mountains to Qvickjock unless strong, and accustomed to long marches and hardships, for in case of bad weather the exposure is great.

At the entrance to the inner Salten fjord, called the Skjærstad, the latter forms a huge basin, partly emptied and replenished by the tides; the water rushes out and in through the channel with such a tremendous force that a boat would be ingulfed by the waves; at the turn of the tide the passage is safe.

When we reached Venset the captain pointed out to me the gentleman to whom I had a letter of introduction. He read

it carefully, and, with the warm-hearted hand-shaking characteristic of the Norwegians, welcomed me, saying that I had better let the steamer go, as he wanted to talk with me, and arrange the best plan for procuring guides. We walked together to his large and commodious dwelling, passing on our way fields of barley, rye, and potatoes, and meadows, for he was not only a merchant, but the owner of a large farm. Near the house was a kitchen-garden, in which strawberries and gooseberries were abundant; and there were fine turnips, pease, carrots, and other vegetables. Herr K—— excused himself for not being able to entertain me suitably, on account of the absence of his wife; but dinner was prepared, beer and wine served, and while we were drinking our coffee we discussed the subject of my intended journey.

"I have come," I said, "to explore the wildest part of Scandinavia; hardship I am accustomed to, and, as for food, I can eat anything. My health is excellent, and I can endure any amount of walking for many consecutive days."

"I will send you to Fagerli with two trusty boatmen, who will put you into the hands of an excellent farmer, and tell him to keep you until he can find Lapps to take you across the mountains to Sweden by way of Sulitelma; but as you want to see plain, honest, good people, they will first take you to Saltdal, and wait for your return. You will sleep at my house to-night, and to-morrow you will start by boat. I will send for the men, and in the mean time we will take a walk."

The scenery at Venset is beautiful; but while there the high peak of Sulitelma could not be seen, being enveloped in clouds.

The Saltdal valley, one of the most fruitful on the Norwegian coast of Nordland, is narrow, flanked on each side by mountains covered with fir and birch to their very tops; in some places the land-slides had denuded the rocks, showing that they had been covered with only a thin layer of soil, upon which the trees had grown.

Oats, rye, barley, and turnips were growing luxuriantly. The farms are situated on the beautiful terraces of the former water-level, rising in amphitheatre, at the base of the mountain; the highest terrace was about seventy feet above the

present river-bed. At one spot a huge mass of rock had fallen a few days before, and had fairly ploughed its way through a hill, shattering the trees in its course, leaving a deep furrow behind, and stopping near the path.

Not far from the sea stands the church, the only one in the valley. A few boat-houses, with nets drying around, and some scattered dwellings, form the lonely hamlet of Rognan.

Soon after my arrival I was enjoying a good meal at the parsonage, where I was welcomed by the pastor and his wife, both of whom could speak a little English; they showed me some translations of my narratives of travel in Africa, which they had just read in the *Skilling Magazine;* they had heard through the Christiania papers that I was to travel in their country. She showed much interest in missionary work, and, before her marriage, had thought of going to South Africa, to labor among the Zulus. The pastor pressed me to use his own cariole and horse; but I declined to accept the friendly offer, as I had already engaged a conveyance.

The inhabitants of the Saltdal are among the most primitive in Norway. They are shut out from the world, except by the outlet to the sea, agriculture being their chief occupation; many of them have never gone farther than the church at Rognan, and most have seen no town larger than Bodö. Though virtually secluded from their kind, they seem content; they have no craving for riches, for they do not know what riches are; the sum of their earthly desires is to add a piece of land to their farms—which is a most difficult thing to do—to get a few more head of cattle, a handsome horse, or a vehicle to go to church with, to build a new house of some sort, and to save a little money for the family. To bring up their children in the fear of the Lord is one of the chief aims of the parents; the young are religiously instructed, and are taught to read even before they go to school. Their pleasures are few and simple—a dance now and then on Sunday evening, social visits, a merry time at a marriage, or during the Christmas or other church holidays, make up the catalogue of their amusements.

In the summer the men work in the fields, fish, construct

buildings, etc.; their wives and daughters follow the cattle, the sheep, and the goats into the mountains, make cheese and butter, and help during the harvest-time. In winter the women spin, and weave hemp and wool, thus clothing themselves with the products of their fields and flocks, while many of the men go into the forest to cut timber.

Although the inhabitants were uniformly poor, keeping no bank accounts, and having no money invested, there was not one who was emaciated by hunger, or who shivered from cold; their food, if coarse, was wholesome, and their appearance proved that they were healthy. There is a prison, but years often pass without any of the farming population finding their way to the cells; the few offences committed are usually of a trivial nature.

There is a carriage-way for a distance of nearly twenty miles, and a bridle-path leading a few miles farther to the last farms. The principal hamlets on the way are Niestby, Medby, Sandby, Brænde, Drageide, and Qvale.

In Norway the *skydsskaffer* (station-men), who are farmers, are obliged, by their agreement with the government, to keep a stipulated number of horses in their stables, according to the travelling or traffic on the highways where they live, and are paid a certain amount yearly. The rules and regulations are also about the same as those of Sweden.

On account of the size and mountainous nature of the country, and of the more scanty population, there are not as many highways as in the latter country, but several of these are simply superb; and one can drive for hundreds and hundreds of miles on roads which might compare with those of the best city parks. The conveyance used is the cariole, with two wheels, having a seat for only one person, with his legs resting outside, and with a back-board behind for driver and luggage, which must be of a very small amount, or another conveyance is required. In several districts the farmers used also the kärre, as in Sweden.

The journey was pleasant, as there were no mosquitoes; the people looked at me as I drove along, and wondered who the stranger could be. I was very much amused, for wherever

I stopped the girls immediately put on their stockings and shoes: most were busy in the hay-fields—the men mowing, and the women and children, bareheaded and barefooted, turning the hay over and stacking it; others were on the river, looking at their nets to see if they had caught any salmon; while now and then a man was building a boat, either for himself or to sell.

THE CARIOLE.

In the evening, the cattle, sheep, and goats were brought in from the mountains, and were penned up in the mowed fields, and the girls were milking the cows; the children were playing about, and they all appeared happy. Everything wore a primitive aspect; the ploughs, the scythes, and other agricultural implements were of the same fashion that had been in use for hundreds of years; the wheels of some of the carts were of solid wood. It seemed as if I had been thrown far back into the past.

We stopped at the hamlet of Nedre Almindingen (*nedre* meaning "lower"), two Norwegian miles from the fjord, to rest for the night. I went from house to house, but failed to discover anybody, and began to fear that all the inhabitants had left for the mountains; the doors of every building were open. We shouted vigorously, but in vain—nobody came; we ransacked the barns, the stables, and the dwelling-houses; I was very hungry—in fact, much more hungry than sleepy. Finally, after making a great uproar, we saw a man and a handsome girl come out of one of the houses, rubbing their eyes, and not yet half awake.

"What do you want, stranger?" was their salutation.

"A bed and something to eat, and a horse for to-morrow," I replied.

"Welcome!" said they; and immediately the maid went into the storehouse, and soon returned with two blankets made of sheepskin, the wool almost as white as snow, with fancy work on the leather side; these were taken into the winter dwelling-house, which had been vacated in the spring, and was faultlessly clean; fresh hay was put upon the bed, as a mattress; one of the skins was laid over it, while the other was to be used as a covering, and a large feather pillow was added. Both then disappeared, and came back with bread and butter, a wooden bowl filled with milk, and a spoon made of horn, and, saying to me "Eat and drink, stranger—good-night—sleep well!" left me in entire possession of the premises.

A tall, old-fashioned clock was ticking in the room, plates and other articles of crockery were on the shelves, and a few common pictures adorned the walls; some wooden chairs, a table and a bedstead, both made of pine, comprised all the furniture; a ladder communicated with the story above.

I lay down between the skins, leaving the door wide open, and soon fell into a profound sleep, from which I was awakened in the early morning by the sound of voices outside. A hand-basin filled with water was brought in for my morning ablutions, and a breakfast of coffee, bread, butter, milk, and cheese was served to me.

The hamlet seemed to be the rendezvous for all the maid-

ens of the neighboring farms; some were very pretty, with flaxen hair, blue eyes, and rosy cheeks—pictures of health, cheerfulness, and happiness. At five o'clock they began to assemble; they had come from a little village on the other side of the river, called Övre Almindingen (*övre* meaning "upper"), and were going to the mountains. Each had a little wooden box, somewhat in the shape of a large book, containing the food for the day, which was soft pancakes buttered, and the ordinary flat bread; most of them also carried a little pail of milk in one hand, and a pair of shoes in the other; all were bareheaded and barefooted, and their hair fell behind in braids; the shoes were to be worn only when the ground was rocky, for in the rural districts money is hard to get, and shoes are precious.

The girls, chattering merrily, soon disappeared from sight, on their way to the mountains, where they were going with the cattle, or to cut hay. Those who carried no milk-pails were knitting stockings as they went along—for the women are always at work, except on Sunday; I could hear the sound of their laughter and the music of their songs as they ascended the hills. The poor hired dairy-maid and the rich farmer's daughter walked hand-in-hand, like sisters, for in this primitive land there is perfect social equality.

I forded the river to the hamlet of Övre Almindingen, which consisted of a few farm-houses with out-buildings. I was surprised to find in the inhabitants of this place a type somewhat resembling that of the Lapps; they were all busily engaged in cutting hay.

The road now lay on the right bank of the stream, and was getting poorer, though still pretty good. Almost all the farms farther up were without people, but at last I came to one where I found the family at dinner around the table; the father was dividing a large piece of raw salt fish, and they ate with a relish; I asked why the fish had not been cooked, and the answer was that otherwise they would eat too much of it. I was invited to partake, and a pleasant chat and numberless questions ensued. The farmer was much older than his wife, who had handsome features and a fine figure, with fair hair

and hazel eyes; but a shadow of sadness rested upon her face, and she appeared weary and worn. She was nursing a child whose mother had died three months before: this was a pure act of kindness, for she had been nursing her own infant for thirteen months.

Storjord, situated at the end of the inhabited part of the valley, is in the midst of wild scenery, and surrounded by a forest. The farm is on the bank of the river Junkersdal, which, taking the name of the valley through which it flows, falls not far below into the river Löniselv; the streams thus united flow through the Saltdal to the sea; in the distance could be seen the snowy mountains of Vestfjeld, and not far off a magnificent cascade, seven or eight hundred feet high, and on the left the high mountain of Kimaanasen.

One night at that solitary but hospitable home was all that I could spare; my room was a picture of tidiness, and I was lulled to sleep by the murmur of the two rivers. The next morning, after a hearty breakfast, with coffee and plenty of milk, wine was brought in, small glasses were filled, and all joined in wishing me a prosperous journey to Sweden. At 9.30 A.M. the thermometer was at 68° in the shade, and 118° in the sun; and at noon, 125° in the sun, 72° in the shade.

On my way back I met the owner of Storjord, who, having heard of my visit, was hurrying home; he seemed disappointed at my departure. I liked his frank, open countenance, and felt sorry that I had not met him before. After a pleasant chat we parted, and I continued my way. At the parsonage the worthy pastor and his wife welcomed me once more, and I had to remain with them for the night. In the morning, before breakfast, we had family worship, the wife playing the accompaniment to the hymns on a melodeon; all stood up, with bowed heads and clasped hands, during prayer. A number of young girls, tidily dressed, had come to pass an examination before the pastor, in preparation for the ceremony of confirmation.

The midnight sun shone no more, and at that hour it was almost dark; it was now the 3d of August, and farther south the days were shortening fast, and it was high time for me to undertake my journey across the peninsula.

My boatmen being ready, we hoisted sail and started. I soon found that my sailor friends knew all the legends connected with that wild coast. "Do you see that?" said one of them, pointing to a high precipitous part of the fjord on our right. "Long, long ago, when Norway was under the rule of Denmark, there was a farmer living on a farm called Leifsets, who one day gave a great marriage feast to his daughter. Some Swedish (*Kvæn*) Finlanders, who had heard of the feast, crossed the mountains, intending to rob the farmer and his guests; but they did not know the way, and came to the house of one of the tenants of the farmer of Leifsets, and compelled him, with threats of death, to put them in the right path. The snow was very deep on the mountains, and the nights were dark; the tenant took a torch, put on his snow-shoes, and told the robbers to follow him. He was well acquainted with the country, and had made up his mind from the start that they should not reach Leifsets. On the journey he approached the edge of a precipice; placing himself in such a way that the glare of the torch prevented them from seeing him, suddenly he threw his torch over the precipice, and the robbers, following the light, fell and were crushed below. Hastening to the farm, the tenant fired his gun through the window, above the heads of the guests, to apprise them of their escape from a band of armed plunderers. The next day search was made at the place where the torch had been thrown over the brink, and below, in the snow, lay the robbers, dead, and frozen stiff." Pointing with his finger, my boatman added, "There is the spot where the robbers were killed, and to this day we have called this place the *Kvæn* precipice."

A little farther on, pointing to a bay, he said, "We fishermen call this the 'Dead-man's Bay,' on account of the sudden squalls which come from the mountains, often upsetting boats, and drowning the boatmen."

The weather became very warm; the mercury standing in the sun at ten o'clock at 118°, in the shade at 68°. At eleven o'clock the sky grew darker, heavy clouds appeared, while the wind was dead ahead, and rising; the fishermen were hurrying ashore, and the people on the banks were carting away

their hay as fast as they could, or piling it in heaps. Suddenly a storm burst upon us; the wind blew hard, and heavy claps of thunder were heard, accompanied with vivid flashes of lightning. Happily, we rounded the land in time, took two reefs in the sail, and, running before the wind, went over the waves at a rapid rate, the sea now and then washing over the side of our boat and thoroughly wetting us. The thunder-storm lasted an hour—the third I had seen within the arctic circle—and it was to be the last of that year.

With a fair wind we arrived at the mouth of a river which was the outlet of the lower Lang Vand (*vand* meaning "lake" in Norwegian); the water of the lake was rushing out with great force, as it was ebb-tide, and the boat had to be hauled along the shore through the short outlet. The lake is about one mile broad, and three or four miles long; the terraced shores were studded with farms, flanked for some distance back by high mountains, whereon you could see the paths by which the cattle were driven to their pastures during the summer.

After ascending a short river we came into a second lake, narrower and longer than the first, with gloomy, rugged shores. At the head is the hamlet of Skjönstuen, completely surrounded by mountains, the lowland having the appearance of the bottom of a kettle. I passed the night in a bed made of fresh hay, covered with sheepskins, but could not get asleep; the mystery was solved by the discovery that a prodigious number of fleas were feeding upon me, and there was no remedy but flight to a convenient table, which answered the purpose of a couch. This was the first time I had made their acquaintance in Scandinavia. Sheepskins, unless freshly taken from the storehouses, are a hot-bed for these pests during the summer, and, as a rule, in very primitive regions, are to be mistrusted.

From Skjönstuen the way is very rough, and sometimes there seemed to be no possibility of going farther, the path apparently ending at the foot of some steep ridge, which seemed to bar our passage; taking advantage of every stone, we slowly made our way up. When deaths occur here, the coffins are lowered down the cliff with ropes.

Twelve English miles from Skjönstuen we came to a farm on the banks of the Lang Vand River, a log-house and two other buildings of sugar-loaf form, made with sods. There was nothing to eat or drink except sour milk.

From this place navigation is resumed, though one may have to wait a considerable time before procuring a boat. After a short pull the upper Lang Vand is reached. We made a sail with birch branches, mounted it on the prow of our flat boat, and, the wind being fresh, made good progress. The lake lying between two high mountain ridges, the scenery was striking, and the occasional fall of a cascade from the rugged and wooded heights added to its beauty. Three rivers, the Ykien, the Lommi, and the Erva, foaming white, fall into the lake, which is filled with splendid trout. A sail and pull of two hours brought us to Fagerli, at its upper end. Three or four farms scattered on the shore made the hamlet of Fagerli. My trusty fishermen took me where they had been directed by the merchant of Venset. Larsen received us kindly, and listened attentively while they delivered their message, and in the mean time the wife prepared a meal for us.

At the foot of the hills, near the lake, stood the humble farm; close by was the river Ykien, on whose banks were stranded many fir and pine logs, which Larsen had cut during the winter, higher up in the mountain, and floated down after the melting of the snow. Some of these were from twenty-three to twenty-five feet in length, and from twelve to sixteen inches in diameter; others, about thirteen feet long, measured twenty-eight inches at one extremity and twenty-six at the other. The little farm had two houses, in one of which the stranger's room was assigned to me. There, while waiting for the Laplanders who had been sent for, I sometimes went fishing in the deep pool of the lake, and in less than half an hour would return with four or five trout, from eighteen to twenty-two inches in length, caught with worms as bait. Milk, cream, butter, cheese, flat bread, and wild strawberries, which the children gathered for me, made up the every-day bill of fare.

Calling at a neighboring farm on the other side of the Ykien, before reaching the house I heard a young mother

singing psalms by the cradle of her babe. She said, as I entered, "This is my first-born, and I want him from his birth to hear me sing praises to God; I want him to fear and love the Lord when he grows up, for God is good to us all."

When I visited the farms my pockets were always filled with candies bought in Bodö, on account of the children who came flocking around me, and I gave them coppers, which seemed to please them, for they shouted "*Penger!*" (money), and made haste to exhibit their treasures. Then I asked them to give me a kiss, which they did; whereupon the married women insisted that two of the grown-up sisters should do likewise. "Go and do so!" they said. This brought flushes to the maidens' cheeks, and they refused; but the matrons insisted, and, in order to have peace, each gave me a hearty kiss, and general merriment ensued. I may add that I was quite willing.

On the banks of the Lommi were two grist-mills; these are seen all over Norway, and in many districts each farm possesses one, or sometimes several farmers are its joint-owners. They are by the side of torrents, and are always picturesquely situated on the slopes of hills and mountains, a number of them often close together. After the hopper has been filled with grain the farmer goes away, coming again when he thinks it requires refilling; or, if the mill be far away from the farm, one of his daughters or maids remains in charge, whiling away the time by sewing or knitting, singing to the music of the murmuring waters, and thinking, perhaps, as little by little the corn is ground, of her lover and her approaching nuptials. The day's work finished, she goes home to milk the cows or to prepare the evening meal for the family, who have gone into the fields to work.

On the 9th of August two Laplanders and a Lapp woman arrived; they were to be my guides, and were old friends of Larsen. Preparations for our departure the next day were at once made. The less a man carries on such a journey the better. My luggage consisted only of an extra flannel shirt, pair of pantaloons and shoes, and a light overcoat; my provisions were hard flat bread, butter and cheese, a flask of brandy (to be

used in case of need), a strong coffee-kettle, a pound of roasted and ground coffee, and some tea. When the weather is wet and cold, or when very tired, I find tea and coffee very refreshing beverages; it is a great mistake to think that the drinking of spirits refreshes the system when overcome by fatigue; the immediate effect is stimulating, but half an hour after one feels more exhausted than before. My arms were a gun, with very little ammunition, for game, and two revolvers; I intended to rid myself of the latter at the first opportunity, for they were heavy, and, besides, I had begun to feel ashamed of having these with me, and carefully kept them out of sight. I had carried them for protection! I had for safety left in London some valuables, including a gold watch-chain; but here I was travelling, I may say without fear of contradiction, in the safest country in the world.

We were all ready to start, and had shouldered our luggage, when Larsen's wife exclaimed, "You must have more bread!" and this was hardly said before more bread and butter, packed in a little box made of birch bark, and cheese were put in my bags. The good woman forgot that we had to carry our provisions on our backs; but, after all, she was right, for even with this extra store, I found afterwards that I ran short of food. I have such a dislike to luggage that I have often been pinched with hunger; but happily I can go without food longer than most persons. When leaving, to each of the children I gave a little money, and in the good-wife's hand I placed a few dollars, whereat she burst into tears, and gave me a good motherly kiss, while the husband grasped my hand warmly, with the words "Thanks for coming to us;" and we said, "*Farvel! Adjö!*" Ole, the young son, went with me up the hill, carrying my gun; and the last words I heard were loud calls to my Lapland guides to "take care of Paul!"

CHAPTER X.

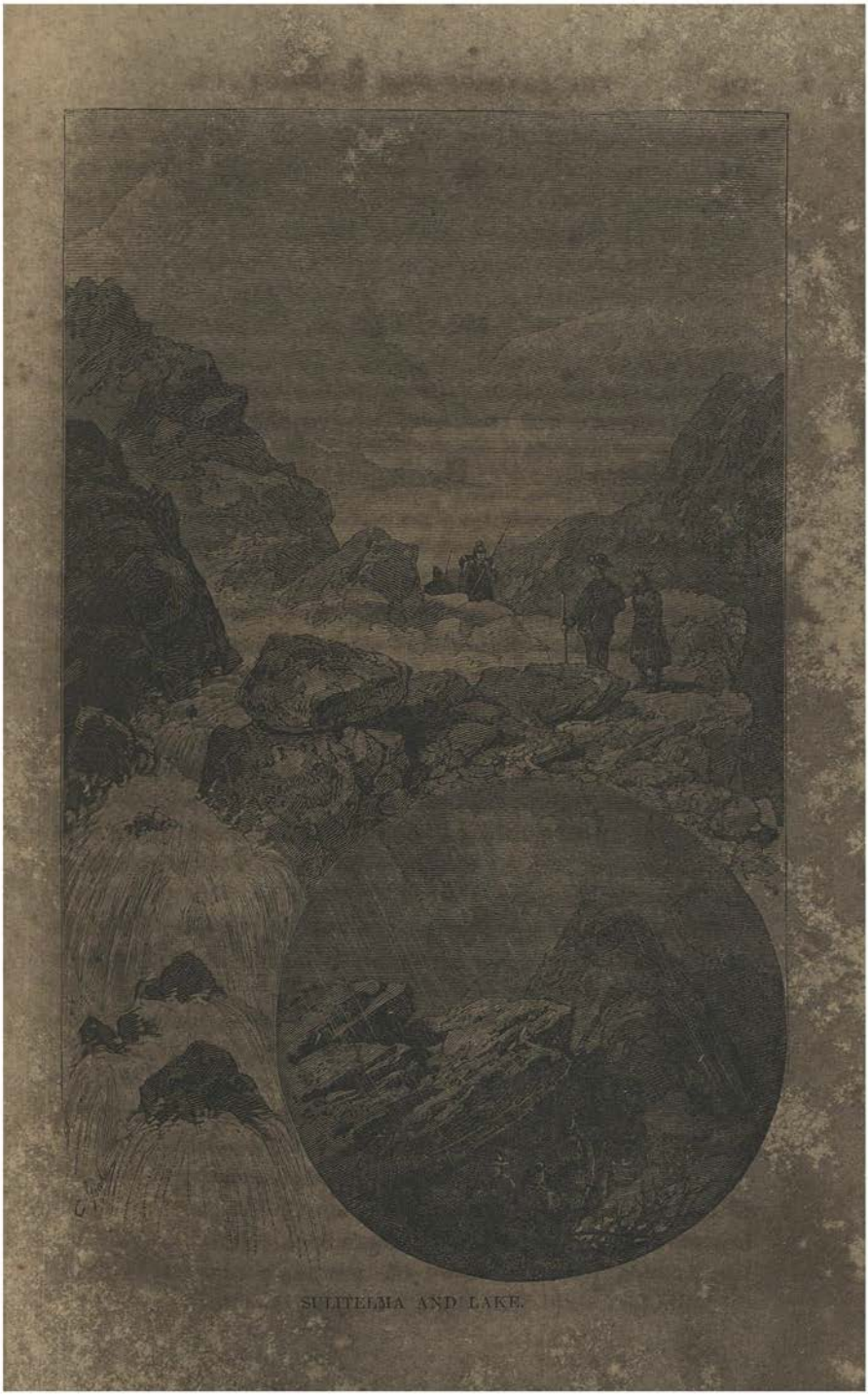
Lapland Summer Dress.—Wild and Desolate Scenery.—Sulitelmâ, and its great Glacier.—Lapp Camp.—Disagreeable Interior.—Uncleanliness and Vermin.—Kind Treatment.—Hard Life.—Lake Pjeskajaur.—Fording its cold River.—Lapp Tent.—Appearance of Women and Men.—Cups and Spoons, and novel Way of washing the Latter.—Arrival of a Herd of Reindeer.—The Milking and the Milk.—Reindeer Cheese.—Hard Travelling.—Njungis.—Qvickjock.—Niavi.—Jockmock.—Baron von Düben.—Devastating Fires.—Vuollerim.—Beautiful Falls.—Luleâ.—Prison.—Drunkenness.—Reception by the Governor.

THE summer dress of the Laplander is well adapted for the climate of the mountains. My two men wore a gray blouse of coarse woollen stuff, called *vadmal*, reaching below the knee, open at the throat, showing an undershirt of the same material; tight-fitting leggings of reindeer leather, bound closely around the ankles by strips of cloth; shoes of the same material, but heavier, with turned-up pointed toes; a coarse, woollen cap; a leathern pouch on the back to contain food, and a belt, on which hangs a knife. The female costume is the same as that of the men, except that the blouse is longer, and closed at the neck.

Wherever the Laplander goes in summer he takes with him a stout birch staff, about seven feet in length, which is used in climbing mountains or crossing streams.

After a moderate ascent we saw Lang Vand below us, hills covered with snow, the foaming Ykien, the Lommi, and the Erva.

In a few hours we were in the midst of very wild scenery. The bare rounded hills made a picture of desolation; the soil was covered with stones of different sizes and shapes, wrenched from the rocks by thousands of years of frost. Snow-drifts became more numerous, and sometimes formed arches over the streams; a mist covered the mountain-tops, and the peak of Sulitelma, 6326 feet high, was hidden in a black mass of



SULITELMA AND LAKE.

clouds. The glacier came in sight, and presented a superb appearance, the ice being very blue, as rains had melted the snow over a large part of its surface; in the distance its crevasses and sinuosities presented a strange spectacle. In the midst of this enormous mass of ice were two bare dark mountains, and for miles beyond the glacier ran from north-west to south-east. At the base was a lake, a hardly perceptible path leading to its lonely shore, where grew the willow, dwarf-birch, and juniper. In a rain storm one might skirt the shores of the lake without seeing Sulitelma. Our route lay by the water, the centre of the glacier bearing north. Rills were seen everywhere, and cascades formed by the melted snow and the continuous rains of the past few days, and there were drifts of snow in every hollow, while large patches stretched down to the shores. The fog had disappeared, and we could see high mountains in a southerly direction. We reached the outlet of another lake, separated from the first by a range of low hills, including some good pasture-land. We rested for awhile, and made a fire for a cup of coffee with the small birch-trees which are found in these high regions; without these the Laplanders could not roam over the dreary mountains. Our fire was the more enjoyable, as the mercury stood at 39½°; notwithstanding which, we got into a profuse perspiration from the exertion of ascending the hills, and felt the wind keenly when stopping to rest.

From the top of a high hill we had one of the dreariest views imaginable — mountains covered with boulders of all sizes rose in the distance, extending very far to the south and south-east, while at other points on the horizon we could see nothing on account of the mist. We never lost sight of the blue outline of Sulitelma, but the peak was hidden from view. The walking at times was extremely tiresome on account of soft snow, into which we sunk to our knees, wet and sandy soil, broken rocks, slabs, and boulders.

As Sulitelma began to bear east of us, with my glass I saw a deep ravine, over which hung a glacier with immense icicles clinging to its sides; the mercury had fallen to 38°, although the wind was from the west. We descended a long sloping

hill; and, as the ravine widened, a torrent-like river from one of the grand branches of the glacier wound its way towards a lake called Pjeskajaur (*jaur*, in Lappish, meaning "lake"). While I had stopped to take the bearings of the mountains and glacier, the woman, who was as wiry as any of us, had gone in advance; suddenly I heard the word "*Samé*" (Lapps), and saw in the distance an encampment of Laplanders, with

A LAPP ENCAMPMENT.

smoke curling up over their *kåta* (tent). Soon after we reached the place, and, entering their shelter, I recognized our female travelling companion; the inmates were her relations, and she knew the tract where they pastured their herds. As I looked around a feeling of disgust crept over me; the tent at its base did not seem more than eight feet in diameter; in the centre a fire made with juniper branches was blazing brightly, having been lighted on our account, for the people have to be economical in the use of wood. In the small space on one side of the tent—the other side, on the left of the door, having been cleared for us—lay huddled together, on reindeer skins wet with rain, three women, four children, two men, and four dogs. The dogs growled at me, but were soon silenced

by a heavy blow of the fist applied to the one which tried the hardest to disturb the peace. The clothes of the men, women, and children were of reindeer skins, with the hair turned inside; the faces of the children looked as if they had never been washed, and those of the grown people could not have been touched by water for a fortnight; they were continually putting their hands through the openings in their garments near the neck, and the suggestion was not pleasant; a large quantity of reindeer meat and other kinds of food lay on the skins on which these people were to sleep.

Such was the picture of the first Lapp tent I saw, and I may add that it also proved to be the worst.

These Lapps were very kind-hearted, and the woman who had been travelling with us was careful to provide for our comfort. A short time after our arrival the kettle was on the fire, and she was grinding coffee, while the head of the family was busily engaged in cutting up reindeer meat, and putting it into a brass pot hanging over the fire by a chain. The coffee was soon ready, and the woman, presenting me a cup, said: "On the road you have been kind to me; you gave me some of your coffee, and some of your food, though you did not know me—I thank you—now let me take care of you. Drink this, and soon you will have plenty of reindeer meat to eat." When it was cooked the father of the family gave to each his portion, but the choice bits were reserved for me and my two guides; we had no forks and no bread. The bones were thrown to the dogs, who watched all our movements with hungry eyes. When bedtime came, and the fire had been extinguished, wet and chilly, I did not know what to do, for I was afraid to remain in the tent, dreading the consequences; yet a hard day's work was before me on the morrow—in fact, it was already to-morrow, the hour being 2 A.M. As I did not wish to hurt the feelings of these people, I concluded to run the risk, and laid down on the skins and tried to sleep. After awhile I began to feel as if creeping things were making their way over me, but attempted to convince myself that this was only imagination; at last, fatigue being stronger than my will, I slept for one hour.

Towards four o'clock I was awakened by the entrance of a Laplander, who had gone during the night, with a herd of two hundred and fifty reindeer, to where the lichen was abundant, and had returned to take his rest; the fellow changed his wet woollen leggings, put on a pair of dry shoes, and soon was fast asleep, not even taking a cup of coffee which stood ready for him.

The life of these Lapps during the summer is a very hard one; they have to follow their reindeer day and night, lest the herds should wander; so that when they return to their tents they are exhausted, and readily fall into deep sleep. A stranger arriving at a kåta, or encampment, might easily get the impression that Laplanders are very lazy, which is far from the truth.

I saw a herd of reindeer crossing to the other side of the river; they swim very well, and sometimes have to go long distances across the fjords; I was told that they could swim about six miles in three or four hours.

Lake Pjeskajaur is about fifteen miles in length, and from two to five miles in width, and is near 67° latitude. The river flowing into it was deep, and the melting of the snow and glacier had made it so turbid that we could not see the bottom, and did not know where to cross. The Lapps tried to ford the stream, but had to return twice; at last we found a place, but it was with great difficulty that we could make headway against the powerful current, or walk over the round pebbles and shifting sand, which gave way under our feet; the water was so cold—being 37°—that it took my breath away when it reached as high as my neck. Gaining the other side, I discovered that there were two more outlets to be forded, but in these, fortunately, the stream was not quite so deep. The cold had so benumbed my legs that I could hardly put one foot before the other: alarmed at these symptoms, I resorted to my flask, and took a good swallow of brandy, and gave some to my Lapps, who seemed to be very grateful.

Our way lay through a morass, which made the walking tedious and difficult, but the severe exercise was precisely what I needed; my limbs after awhile began to lose their ri-

gidity, and a warm glow of the skin made me feel that I was all right again. The centre of the glacier seemed now to be north-west, and here appeared in the shape of an arc, running from north-north-west to north. Crossing another river, the water of which was much warmer, as it did not come from glaciers, we came to a few good-sized birch-trees (*Betula glutinosa*), the remains of a former forest; I have regretted ever since that I did not cut one, to count the number of rings and ascertain their age, for these grew at the highest elevation I had seen within the arctic circle.

On reaching the crest of a small hill we saw in the distance another kåta; there were several Laplanders outside, from Lule, Lappmark, whose pasture-grounds extended as far as Sulitelma; when they saw us they immediately went inside. On reaching the camp I found three young women and one man; the former were just giving the last touches to their toilets—one was putting on a handsome silver belt, another arranging her dress, a third fastening her shoes. Their dresses of thick blue woollen cloth, called *vuolpo*, were trimmed with red and yellow bands at the lower end of the skirt, and revealed a woollen undergarment—the overskirt reaching to the ankle; their undershirts were nicely embroidered at the openings, and looked quite pretty, the color contrasting well with that of the skin. They also wore belts, which are considered one of the chief ornaments, and some of them are expensive. Only one had a belt ornamented with silver, the others were made of copper; these ornaments, about one inch wide, were fastened upon the cloth so close together that the material could hardly be seen; a pretty clasp fastened the belt, and from it hung a little knife and a pair of scissors. Woollen leggings of a bluish color, fitting somewhat closely, completed the costume. One of them wore new summer shoes, made of dressed reindeer skin, without heels; the other two had no shoes, and I noticed that their feet were small, well-shaped, and very clean. The men's frocks (*kapte*) were shorter, like those of my guides, falling a little below the knees, and were trimmed at the bottom with a band of bright color, contrasting with the blue; the collars of their under-

shirts were embroidered with bright-colored thread. The belts worn by the men were sometimes two or three inches wide, made of leather, with bears' teeth, to show that the wearer had killed his prey; they often wore a sort of waistcoat, richly adorned with silver ornaments, showing through the opening of their kapte.

The women's faces had been washed, and their hair combed; their heads were covered with a rather graceful cap. I was surprised at the good looks of two of them; they had blue eyes, very small hands, and fair hair, of a somewhat reddish tinge; their complexions were rosy, and the skin remarkably white where it had been protected from the wind. The men's skins were quite red, having been tanned by exposure.

There was not the slightest appearance of shyness in these people; we were welcomed at once; the coffee-kettle was put over the fire; coffee, already roasted, was ground, boiled, and clarified with a piece of dry fish-skin, and served to me in a queer-shaped little silver cup, which I admired very much; it was a family heirloom, said to be about a hundred years old. The shape of the spoon was very graceful. This also was a family relic, and a great deal older than the cup; it was not clean, reindeer milk having dried upon it, and I was much amused at the way the girl washed it. As there was no water at hand, she passed her little red tongue over it several times until it was quite clean and smooth; and then, as if it had been a matter of course, filled it with milk from a bowl, stirred up the coffee, and handed me the cup. I did not altogether admire this way of cleaning spoons. Happily, her teeth were exquisitely white, and her lips as red as a cherry; and, although I have seen many Laplanders since, I think she was the prettiest one I ever met.

The coffee was excellent. I had hardly finished a second cup when a Laplander came in, followed by several dogs; he had just arrived with two hundred and seventy-three reindeer, which were around the tent, but the approach had been so quiet that we did not hear him. Some of the animals were eating the moss, using their forefeet to detach it, while others were lying down; the males were of large size, with spreading

horns, the females much smaller. Not one showed any inclination to move off, the whole herd being as still as the cows which come to the farm-yard to be milked; the bulls were quiet, though several were butting one another; I was told that their horns often become so entangled that the animals cannot be separated, and have to be killed.

I watched the milking with great interest. The women knew every animal around the tent, and if one had been missing they would have been able to designate it at once. Those which were to be milked were approached carefully, and a lasso was thrown gently over the horns, and knotted over the muzzle, to prevent the deer from running away; but they made no effort to escape. Sometimes one would hold the deer while another was milking; but the animals were so gentle that they required no coercion. The process was peculiar: the woman held in one hand a wooden scoop, frequently pressing hard with the other, for the thick fluid seemed to come with difficulty; it was poured from the scoop into a keg-like vessel closed by a sliding cover, and so contrived that it could be carried on the back of an animal. Skin bladders were also filled, to be used by the Lapps who were to remain the whole day with the herds. I was surprised at the small yield—some not giving enough to fill a small coffee-cup; but it was very thick and rich—so much so, that water had to be added before drinking; it is exceedingly nourishing, and has a strong flavor, not unlike that of goat's milk. The milk of the reindeer forms a very important item in the food of the Lapps, and possesses an amount of nutrition far greater than that of the cow or the ass; strange to say, the butter made from it is so bad that one might almost fancy that he was eating tallow; accordingly, the Lapps make very little butter, but cheese is produced in large quantities.

In the making of cheese, the milk is first heated, and the scum rising to the top is put in a wooden bowl, while the greater part is then placed in an empty bladder, which is afterwards hung up for its contents to dry; this dried scum, which they call *kappa* (cream), is considered a great dainty, and is always given to distinguished guests. Then rennet

is added to the milk. The cheese is pressed by hand, and is packed in round wooden boxes, or put in forms made of plaited spruce roots; after it is dried it is hung up in the smoke in the kåta; it is white inside, and tastes of the milk, a great deal of which is kept for winter use. The Lapps are very fond of thick milk, but, on account of the climate, they have to hasten the coagulation by adding fresh butterwort (*Pinguicula vulgaris*).

I had always thought that the Lapps had black eyes and dark hair, but these were fair-skinned and fair-haired, with blue eyes; the cheek-bones were prominent—in two of the women not unpleasantly so—and the nose was peculiarly Lapp and *retroussé*. Measurements of the three women showed heights of four feet and one-quarter, four feet and three-quarters, and four feet six and three-quarter inches; the height of the two men ranged from four feet five to five feet and one-quarter inch. The facial measurement of the women, from the top of the nose to the point of the chin, ranged from three and three-fifths to four, and that of the men from four and one-half to four and three-quarter inches.

While the men were enjoying their pipes the women busied themselves with cooking. A porridge was made of the dry skimmed milk, stirred into water with a wooden spoon—a palatable and very nutritious dish. Each person had a little bag, from which a spoon was taken for table use; the tongue was used in place of water and a towel, and the fingers were passed around the plate until every remnant of the porridge had disappeared. Forks are not used among the Lapps, but some of their silver-ware is very old, and their spoons are of the same shape as those found among the peasants of Sweden and Norway.

The hungry dogs, who had made their way into the tent, watched us with gleaming eyes; when we had finished, a little water was added to the porridge that was left, and a portion was given to each dog, who devoured it voraciously. Then the man whom I had first met started with the reindeer for some part of the mountains where he knew the moss to be abundant, and not very far distant from the tent; he was to

A TARTAR'S ENCAMPMENT.

remain with the herd until evening, when he would be relieved from duty; the other stretched himself on a deer-skin, and soon fell asleep, and we all did the same—bundling ourselves together the best way we could in such limited quarters.

The tent used by the Laplanders is very portable, and is conveyed from place to place by the reindeer. Its frame is composed of poles fitting into each other, easily put together, and so strong and well knit that they can resist the pressure of the heaviest storm; a cross-pole, high up, sustains an iron chain, at the end of which is a hook to hold kettles. Over the frame is drawn a cloth of coarse wool, called *vadmal*, made by themselves, no skins being ever used; it is composed of two pieces, and is made fast by strings and pins, and well secured; the porous quality of the cloth permits a partial circulation of air; a small door, made of canvas, is suspended at the top of the entrance. The woollen cloth is exceedingly durable, often lasting more than twenty years; the tents are frequently much patched, for a new covering costs from thirty to forty dollars. In summer their tents are usually pitched near a spring, or a stream of water, where the dwarf-birch and juniper furnish fuel, and not far distant from good pasture.

The encampment was about to be removed to another place, and trained animals had been brought to carry the luggage. It is far more difficult for the Lapp to move in summer than in winter, for then, instead of drawing their loads, the reindeer carry them on their backs, and therefore, at this time of the year, the outfit is much smaller; the animals used as beasts of burden are generally geldings, large and strong.

The tent had been taken down, the awning put by itself, and the supports divided into several bundles; clothing and other articles had been packed in wooden boxes about eighteen inches long by twelve wide and six deep, fastened with strings, and so arranged that one box could be placed on each side of the saddle; there were also bags, some of which were like strong nets. The *svaka*, or pack-saddle, is a curiosity; it consists of two pieces of wood, rounded so as to fit the shape of the body, with pieces of leather at the end; this is put upon the back of the reindeer exactly as we would sad-

dle a horse, but more forward, a blanket of coarse wool or a piece of reindeer skin being placed under it to protect the back of the animal; the burdens are disposed on each side, so as to balance each other, and are then carefully secured: from eighty to one hundred pounds seemed to be the average weight each animal carried. A few of the poles were bound together, and thus drawn along the ground.

Seven reindeer were attached to each other by strong leather ropes, made fast to the base of the horns, and one of the guides led the file; a few unburdened animals followed in the rear, to take the places of those which might become weary; they were troublesome at first, and the Lapp ahead had to pull them along.

We parted from these kind-hearted people, and continued our route in an east-south-east direction, meeting here and there terraces along the river, indications of former risings of the land. Near the pools grew the famous Lapp "shoe-grass," of which there are two varieties—the *Carex ampullacea* and the *Carex vesicaria.* It is gathered in great quantities in the summer months by the Laplanders, who dry it and keep it carefully, for it is indispensable in winter. It is worn in their shoes, because it has the peculiarity of retaining heat, and keeps the feet so warm that the cold can be defied; it is also used in summer shoes, to protect them while walking over stony ground.

The great glacier was always in sight, but the upper part of Sulitelma continued to be hidden; as the clouds were moving swiftly, I hoped that the summit might be seen, and stopped to watch — suddenly the peak became visible for about fifteen minutes, bearing precisely north-west by the compass. As the sun shone upon the ice its hue was simply marvellous; it seemed in many places like a huge mass of sparkling topaz; its extent was enormous, and patches of snow were scattered over its surface. There were only two breaks of dark rock visible in the frozen mass; and towering above all was Sulitelma, dark and gloomy, looking down upon the sea of ice.

Farther on we reached the summit of another chain of hills

HERD OF REINDEER FEEDING. From a Photograph.

in this great mountain range, from which I saw a small glacier bearing north-north-east by north.

Our route now was over a very hilly and desolate region, in the midst of which were numerous small lakes. We met several Laplanders, with many herds of reindeer together; but each owner knows his own by a special mark on the ears. The mosquitoes, which had let me alone for nearly two days, again became plentiful, and, with the thermometer ranging from 44° to 45°, they bit venomously.

At times during the day we reached the snow line. As we ascended, the bare patches became less numerous, and the line was broken only by ridges of rock. Yet, in the midst of this barren spot, where the mean temperature of the year is about freezing-point, many flowers flourish: the *Ranunculus nivalis* and *glacialis* (buttercups), *Rumex digynus* (dock), *Juncus curvatus* (rush), *Silene acaulis* (catchfly), and *Saxifraga stellaris*, *rivularis*, and *oppositifolia*. Many times have I remained standing in admiration before this last exquisite flower, which looks like a velvety carpet of purple moss, and grows in patches on the dark rocks, often surrounded by snow; the first time I saw it was on the top of the high hills back of Hammerfest, when it was in full bloom. These plants grow here, a little over four thousand feet above the sea-level, and on the snow line. Higher up they gradually diminish in number, until the *Ranunculus glacialis* is the only flower left; the lichens at last disappear about two thousand feet above the snow line.

The travelling was very hard; steep hill after hill had to be crossed, walking on nothing but broken stones, which sometimes lay thick upon one another, and of all sizes and forms; boulders were scattered everywhere, and the declivities of many of the hills were covered with them. I do not know which is the worst—to travel through the soft, black, wet morasses, where one often sinks knee-deep in mud, or to step from one boulder to another, and over loose stones, at the risk of a fall that might break an arm or a leg, or cause other bodily injury: even the feet of my Lapps had become sore.

Everything was bleak and dreary; the lichen was short,

growing on the bare rock; the grass in the hollow of the valley was hardly green yet, although it was the middle of August, and but few wild flowers were seen. Pointing to a series of lakes, my Lapps said they formed the waters of the Pite River.

As we were over-fatigued by the hard journey, and wished to see a kåta, the immense rocks seen in the far distance appeared to our hopeful imaginations like houses, so that often we made sure that some of these were Lapps' tents, only to be undeceived when coming near them. From every hill we had looked in vain for one of their encampments, for the weather was rainy and cold; sometimes we took refuge under a large stone, to protect ourselves during heavy showers.

In the evening, finding a huge boulder placed in such a position upon another that we could shelter ourselves under it, we concluded to remain there for the night, as there were junipers and dwarf birches growing near it. The thermometer stood at 44°, and we collected over a hundred dwarf birch-trees of that high altitude to keep ourselves from freezing, from the mosquitoes, and to dry our garments. We first tried one side, but the rain dripped heavily upon us; then we went to the other side, which was not much better; indeed, wherever we turned the rain and the cold wind beat against us, and added to this was the discomfort caused by the smoke and flame. I tried to sleep seated with my back towards the rock, but it rained so hard that I was driven out, and at three o'clock the weather became so cold, and we were so wet, that none of us could endure it any longer, and we thought it was far better to walk; so we arose with stiff limbs, which we hoped would gradually grow flexible as we went on, and, after each had taken a cup of hot coffee, we again set out at a quarter past four, the rain still pouring down: we were so weary that, whenever we stopped to rest for a few minutes, we were sure to fall asleep.

Our route continued south-east by east, the walking being very bad. We had to cross large morasses, to traverse stony soil, which gave way under our feet, to clamber over boulders piled upon each other, and to pass streams, rivulets, and

soft patches of snow, until at last we reached the highest point attained since our departure from Fagerli—over four thousand feet above the sea.

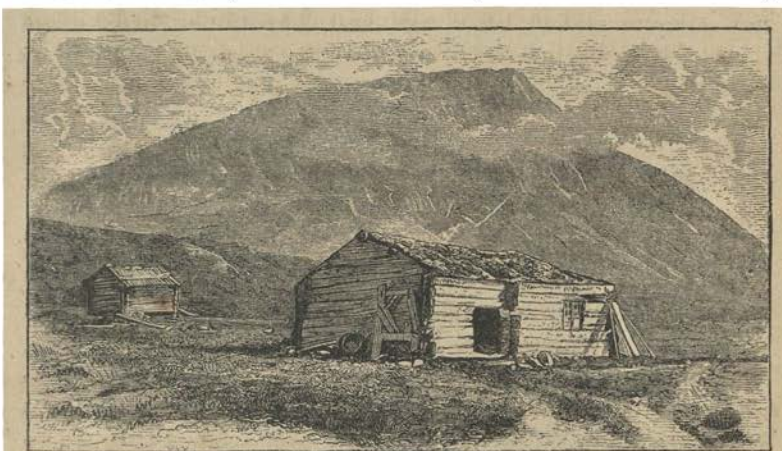
Of all the bleak landscapes I had seen on the journey this seemed the most dreary; it was absolutely grand in its desolation. There was an indescribable charm in the loneliness and utter silence; bare mountains of granite and gneiss formed the setting of the picture, and all around were stones of all sizes and shapes, piled in heaps. Over these we had to wind our way for hours, jumping from one to another almost continuously, until our ankles became sore from the weight of the body. All the hard pedestrian exercise I had ever taken was as nothing compared with this; worse stony ground and steeper hills I have seen, and even, for a short time, I have perhaps found tracts more difficult, but I have never gone through such a country for so great a length of time. Had my guides made a mistake in the road?

By noon, the weather having cleared, we rested in a sheltered spot, and on the rocks, covered with short lichen, well protected from the wind, stretched ourselves, for we needed sleep. The temperature had risen, the mercury standing at 54° in the shade made by my body, and at 95° in the sun, and our lichen-bed was soft and warm; no bed had ever seemed so good to me. I soon fell asleep, but was awakened an hour later by a chilling wind, and found the sky again clouded. I roused my Laplanders, and we started on our journey.

We had now reached a sub-alpine region, characterized by the *Betula alba*, variety *glutinosa* (birch), its upper limit being about two thousand feet below the snow line; but even here was vegetation on the warm side of the hills, where the sun-rays are powerful, and the *Sonchus alpinus* (sow-thistle), *Struthiopteris*, *Aconitum lycoctonum*, *Tussilago frigida* (colt's-foot), could be found.

Skirting the side of a hill, I could see, in the distance, Lake Saggat, on the shores of which is Qvickjok. On the other side of the valley stood Njungis, a little farm on the banks of the Tarrejoki. My guides proposed that we should cross the river and sleep there; I foolishly refused, contrary to my cus-

tom always to listen to their suggestions. There are days in these mountains when everything at a distance seems near, and the stranger must beware of the deception; this day was such a one. We came at last to the bottom of the valley, and found ourselves in a forest of pines, growing but a few miles south of 67°. From the branches hung long dark moss; under the trees it formed a thick carpet, which gave out a great quantity of water when trodden upon, especially after a rain. The stem is composed of small cells, which retain the water,



NJUNGIS.

and the mass is so compact that evaporation is very slow, and it never becomes entirely dry. In the midst of this velvety carpet were many ripe cloud-berries, and for an hour we ate them, for we had taken nothing since morning but coffee.

We forded a stream about four feet deep, and reached a sort of cave formed by boulders, where the Laplanders wanted to sleep; but I urged them to go on, for many persons had apparently slept there before, and I was afraid of the place, which looked dirty. A little farther on we encamped for the night under tall pines, not far from the Tarrejoki. We were completely tired out—for thirty-six hours we had been on the march, and all of us were lame. Since I had left Fagerli, four days before, I had not been dry.

We built a fire, about six feet long, on each side of every one of us, and covered it with moss, in order to produce a thick smoke, to drive away the mosquitoes; the moss formed a soft couch, but I could not sleep. At five minutes past eleven o'clock, looking up through the branches overhead, I was gladdened by the view of a star, the first I had seen for about three months; it was Vega, twinkling brightly—an old friend, who had often helped me to find my way through the African jungle. Later I was awakened by a burning sensation—the moss had taken fire, and, like tinder, had burned slowly till it reached me. I can realize from this how forests are set in a blaze by persons not extinguishing their fires as they leave their encampments.

Early the next morning resuming our journey, and still keeping to the shore of the Tarrejoki, we found ourselves in the midst of grassy fields, and groves of birch-trees, alders, and willows, which grew thickly on the river-banks. What a contrast with the day before! My Lapps climbed a tall birch, and shouted for the people to come over with a boat; but they shouted in vain, for the wind was contrary, and they could not be heard. I then fired my gun several times, and waited. Presently we heard voices, and after awhile the sound of oars; a boat containing two men was coming towards us, and soon after we landed in Qvickjok, which is said to be about sixty miles from Sulitelma.

The hamlet is near 66° 55′ N., at the head of Lake Saggatjaur, which forms the first large reservoir of a series of lakes in the water-shed of the Lilla Lule (*lilla*, little) River. The Kamajoki, a mountain-stream, rising from a little lake, filled the air with a constant murmur as it dashed against the rocks.

In the humble log-church, built in 1671, there was apparently sitting room for about one hundred and fifty persons; but I was told that on the occurrence of religious festivals two hundred and fifty could be wedged in. Over the altar hung a picture of the Saviour, represented as a little child; further, there was a portrait of King Carl, and scattered along the walls were some rude paintings of a religious character. Adjacent to the church was the little burial-ground; over some

of the graves were frames protected by glass, in which the names of the departed were recorded, written on paper.

There was a school-house, where the children of the nomadic and stationary Laplanders received instruction. The people of the place owned about twenty-five cows, twelve horses, and from eight hundred to one thousand reindeer.

The two most conspicuous homes were the parsonage (but the pastor was absent), and that of the *klockaren* (sexton). The latter farm had two houses, one of which was for travellers, as he had charge of the boat-station. Mosquitoes were here a perfect plague.

A book was shown to me in which travellers had written their names, and among the signatures were those of King Carl XV., who visited this place on the 16th of August, 1858, and Prince Oscar, now king, on July 28th and 29th, 1870.

The lake is 957 feet above the sea: fish were abundant. Above the limits of the fir and pine, perch and pike are not found in the lakes; but the char and trout occur as high as the upper boundary of the birch region, after which all fish disappear. The upper end of the lake presented a richness of vegetation which was the more gladdening to the eye after the weird mountains I had crossed.

Such flowers as these were cultivated at the parsonage: *Calendula* (marigold), *Reseda* (mignonette), *Iberis* (candy-tuft), *Baptisia* (false indigo), *Stellaria* (chickweed), *Malva* (mallow), *Tagetes* (French marigold), *Aquilegia* (columbine), *Campanula* (harebell), *Dianthus* (pink), *Convolvulus* (bind-weed); also carrots, turnips, radishes, parsley, spinach, lettuce, shallots, and rhubarb.

The weather was pleasant, and on the 13th of August, at 11.30 A.M., the mercury stood at 59° in the shade, and at 119½° in the sun. The highest temperature I found here in the shade was 66½°, and the lowest 49°.

My two guides had fulfilled their promise to Larsen in Fagerli, and desired to go back to the mountains; I paid them, and we parted excellent friends.

From Qvickjok to the shores of the Gulf of Bothnia the distance is 19½ Swedish miles. The journey is easy, a great

part of it being by water, through a series of lakes communicating with each other by short rivers; but the latter, on account of their rapids, are not navigable. Roads form the communication between the lakes, and there are regular boat-stations. This chain of lakes, descending gradually from one to another, resembles a series of basins, and forms a striking feature of the landscape. The Saggatjaur is about 21 miles long, 957 feet above the sea, with a rapid at the lower end; the Tjåmåtisjaur and the Skalkajaur are connected, without rapid, 30 miles long, and 935 feet above the sea; the Parkijaur, 5 miles long, and 929 feet above the sea; the Randijaur, 894 feet; the Purkijaur, 894 feet; the Vajkijaur, 808 feet.

On August 14th I bade farewell to Qvickjok. At the lower end of the lake an island and a mass of rocks and boulders intercept the navigation, and the swiftness of the current warned us that we were nearing the rapids; but by a skilful move the boat came to an eddy, and we landed on the left bank of the river. A walk of twenty minutes brought us to the head of Tjåmåtisjaur, and to Niavi, situated near the shore, and not far from the point where the turbulent outlet of Lake Saggatjaur throws itself into the Tjåmåtisjaur.

Niavi was a very comfortable farm, and the dwelling-house contained several large rooms. The dining-room was a model of cleanliness; the walls were papered; the white pine floor could not possibly have been whiter; and the food was well cooked and well served. Ten cows, four horses, and about two hundred reindeer composed the stock; the cows and horses were pasturing in the woods. The hay crop was green, potatoes were growing finely, and the barley had a yellow tinge, and was nearly ready to be harvested.

My new boatmen were two stout young farm hands; their long straight hair, hanging low upon their necks, forming a good protection against the mosquitoes. Though they had worked hard all day in the field, they pulled hard. When the air grew chilly one of them insisted upon giving me his coat, over which his shaggy hair had fallen. There was no help for it; I could not say nay, although I knew very well what the penalty would probably be.

The shores of Lake Tjåmåtisjaur were uninteresting; the higher hills being remote from the water, and the country became less and less picturesque as we went eastward.

At a distance of about twelve miles from Niavi we came to Tjåmåtis, composed of several farms, near the outlet of a river formed by several lakes, the amount of water from which is considerable. Lake Tjåmåtis narrows and forms a channel for a few hundred yards, below which are a few islets, and the entrance to Lake Skalkajaur. At the lower end, near its outlet, is the island of Björkholm, with a boat-station. Everybody had retired; but the doors were not locked, and we entered one of the farm-houses without knocking. The husband was not at home, but the wife got up and gave me a supper of cold fish, bread, butter, cheese, and milk, and prepared a bed.

After a rest of an hour, my boatmen returned to Niavi, but not before shaking hands with me, according to custom. These men had worked all day when I arrived at Niavi, yet thought nothing of a pull of thirty miles. They had rested for only one hour, and were going back, for they were needed at home. They would have felt ashamed if they had taken advantage of the fact of their additional toil as an excuse for laziness.

A short walk through a narrow path brought me to the head of Lake Parkijaur, and an hour's sail to its lower end, where there is only one farm. After another short walk past the rapids I came to Lake Randijaur, and to a farm-house—the only habitation I could see on its shores. The single room presented such a picture of filth that it repelled me: I looked at the two beds, and shuddered at the thought of the vermin inhabiting the dark sheepskins, and thanked my stars that I was not to sleep here. The furniture consisted of some carpenter's tools, a coffee-pot, a few wooden bowls and dishes, two or three coffee-cups with saucers, a frying-pan, a kettle, some wooden benches, a wooden table, and a number of old and much-used religious books. There were eight children in the family, several of whom were married; but the old man and his wife and a Lapp woman were the only occupants of the house.

When ready to start, the old woman washed her face and hands, combed her hair, and put on a clean dress over her dirty one, while the old man attired himself in his Sunday clothes, to take me to the next station, as boatmen always dress themselves in their holiday attire on such occasions. The couple got tired after a two-hours' pull.

Another station was at the lower end of the lake. Here the clothing of the men and the jackets of the women were made of skins, from which the hair had been removed, and all were equally filthy. At dinner they had no bread, butter, or cheese, but ate boiled fish in enormous quantities at a very dirty table. They drank sour milk from a bucket, but insisted that I should take a cup of coffee, which they made specially for me.

Here, after a ten minutes' pull, and a walk of forty minutes over a good road through a forest, we came to the head of Lake Vajkijaur, where were a number of reindeer, which had been left to graze on the lichen. The scenery had now become very tame. I obtained new boatmen, two boys and their father, all of whom pulled as hard as they could; and, leaving the boat, a walk of an hour brought us to the Lapp hamlet of Jockmock. On my way to Jockmock an unaccountable fit of hunger had seized me. On arriving at the station I immediately called for food; but, unfortunately, the landlady was absent, and the minutes I had to wait seemed hours.

The village was completely deserted, and as no food was obtainable, I sought diversion by a ramble through it. While I was wandering, amusing myself by gazing at the log-houses with their earth-covered roofs overgrown with grass, and seeking for a human face, I saw a gentleman coming towards me, and remembered that I had a letter of introduction from the celebrated arctic explorer, Professor Nordenskiöld, which had been given me in Stockholm, to Professor Baron von Düben, whom I was told I might meet in Lapland, as he was engaged in the study of that people. Instinctively I felt that this new-comer was the baron. We saluted, and looked at each other, and I asked, "Are you, sir, Professor Baron von Düben?" "Yes," he answered. I said, "I have a letter of introduction to you. I have just crossed over from Norway." "I am glad to hear

it," said the professor, in perfect English. "I am so hungry," said I, "that I do not know what to do with myself. I am getting dizzy, and the servant at the station does not seem to be in a hurry, as her mistress is not at home." "Come with me," was the response; and we went to the parsonage, where he was a guest. I was presented to the hostess, and then to the baroness. The pastor's wife disappeared when she heard that I was half famished, and soon after I was invited to sit down to a bountiful meal.

The baron and his wife had spent the whole of the summer in Lapland. We concluded to travel together as far as the sea. To them I am indebted for a great deal of kindness, not only on our journey but also in Stockholm, and for many valuable letters of introduction, and also for several of the illustrations of Lapland which accompany this narrative—the original photographs having been taken by the baroness herself.

This Lapp village of Jockmock has a school and resident pastor. Its queer-looking church, with detached belfry, was built in 1753, a former one dating from 1607. It stands upon a hill, at the base of which flows the Lilla Lule River, the outlet of the lakes. In the well of the parsonage ice and snow seemed about two feet thick; and for only about three months the ground is without snow, the depth of which averages about four feet, and the ice three feet thick on the lakes. The frost penetrates the ground to a depth of six feet.

One of the occupations of the people is the mussel-fishery in the river. Many of the shells contain pearls of considerable value.

There is a very large tract of country known as Luleå Lappmark, which has an area of 327 Swedish square miles, composed of two *socknar*, or parishes. The parish of Jockmock, according to the last census, contains 648 Laplanders. It is divided into four *byar*, or districts—Jockmock, Tuorpenjaure, Sirkasluokt, and Sjokksjokk; each one has its own pasture-ground in the mountains. Very few of these Laplanders ever go as far as the Norwegian coast.

From Jockmock, the Lule, as far as Storbacken, a distance of four Swedish miles, is not navigable, forming an almost con-

tinuous succession of rapids. A highway commences here, completed only a few years ago, and constructed during the great famine of 1867; a year memorable in the annals of Northern Europe, when, in consequence of an early and heavy frost in summer, the crops were destroyed, and desolation and death spread over vast districts. The lichen and the bark of the birch-tree, mixed with a little flour, became the food of the people after the cattle had been eaten up and nothing else was left. The year following a strong tide of emigration set out for America.

This road passes through a monotonous country, among morasses, through districts strewed with granite boulders. At the time of my journey the burned forest presented in many places features of utter desolation. These conflagrations are generally occasioned by the carelessness of the Lapps, or woodmen who neglect to extinguish their camp-fires. The loss is very severe, for trees in those regions grow very slowly, and it takes at least one hundred and fifty years for them to attain one foot in diameter; some are found not even half a foot in diameter, which are more than two hundred years old. There were thousands upon thousands of large fir-trees, either lying on the ground, blackened and charred, or standing, like black pillars, with their branches and tops burned off, while heaps of ashes and charcoal were seen everywhere. There was not a blade of grass or moss on the parched ground; but now and then a tree or a cluster of trees had escaped the fury of the flames, making one marvel how it could have happened, for everything around had been destroyed in the fiery storm.

The farms were fast improving. In some houses the walls of the rooms were covered with paper; porcelain stoves ornamented the premises; fine white linen cloth covered the dining-room table for the stranger. Sometimes there was a little garden, in which radishes, onions, lettuce, and green pease were growing. Here and there, suspended on some of the trees, a wolf-trap caught the eye.

Vuollerim is beautifully situated by a sheet of water, shaped like a horseshoe, and surrounded by fields of barley, oats, potatoes, and grassy meadows. The roofs of the houses were

covered with birch-bark, over which poles were placed very close together, as a protection against the wind; on the top of many was a platform for drying the flesh of reindeer and sheep, which are slaughtered in November.

Not far from the hamlet the Lilla Lule River unites with the Stora Lule (*stora* meaning "large"), which rushes down through a grand rapid, and then forms the Porsi Fall, which is about ten feet in height. Below the fall the dry gravelly bed showed that the water had subsided.

The Stora Lule is the outlet of a series of lakes, like those forming the Lilla Lule. The upper one, the Virijaur, rises near the base of the great glacier of Sulitelma, 1948 feet above the sea. By ascending the river, the traveller will see the fall of Niommelsaska, which is formed by the Stora Lule River. In July it is said to be very fine, for that is the time when there is the greatest quantity of water. Part of the stream is a wild rapid, with a total fall of 251 Swedish feet; in one place it leaps a distance of 102 feet. Grander still is the fall of Adnamuorki-Kortje, formed by the outlet of Lake Gjertejaur, at the point where the waters descend into Lake Pajiplolilujaur from a height of 134 feet. A few miles below Vuollerim the high-road ends at Storbacken, the river having fallen 650 feet from Jockmock. Here the marked changes between night and day are exhibited in the following thermometrical record for August 18th: At 8 A.M., 51½°; at 9 A.M., in the sun, 94°; at noon, in the shade, 60°; at 2 P.M., in the shade, 60°; at 3.30 P.M., on the water, in the sun, 106°. There was not a breath of wind during the whole evening, and I noticed that these great changes came gradually with a perfectly still atmosphere.

On the 19th, at 6 P.M., the thermometer stood at 54°; but the air became chilly as the evening advanced. The sky was quite clear, and by eleven o'clock the temperature had fallen to 42°, and there was fear of a frost. By midnight the mercury marked 38°. During the night the weather became colder; and when I went out at 4 A.M., August 20th, the grass was white with frost, and the thermometer stood at 32°, although the sun was shining; but luckily the grain was not injured.

It appears that from the 20th to the 24th of August, in some years, a heavy frost occurs in this region which injures or destroys the crops; but if the frost does not come, these are generally secure.

The wild raspberries were ripe, sparrows were numerous by the farms, and the swallows had not yet left for the south.

One of the facts which particularly struck me within the arctic circle was the great difference of temperature in the sun and shade. I have noted, in the course of this narrative, the extent of these variations; and the reader, like myself, has no doubt been astonished to learn how powerful were the rays of the sun. Going out of its warmth into the shade, one feels the cool atmosphere, which often produces a chill, so great is the change. The heat of the sun was the greatest when it shone between the heavy leaden-colored clouds. My observations were made simultaneously with several thermometers. In the sun I used only the glass tubes, blackened bulb, which were placed in my felt-hat, carefully guarded against the wind, for the least breath on the glass at once produced a change of several degrees.

From Storbacken the Lule River, on its way to the sea, forms two reservoirs or lakes, between which, at Edefors, a distance of about 26 miles, is a fine rapid; the second lake is 76 feet above the sea. Six miles farther navigation is resumed for a distance as far as Hedensfors, with another fall, below which, at Råbäck, a steamer takes you to the town of Luleå.

On the last two lakes the farms and hamlets are more numerous, and larger, and the landscape diversified with forests and fields.

The rye here often yields enormous crops, and was very good; many of the stalks were six and seven feet high, and some taller. The *Blåklint*, *Bluets* (commonly called bachelor's-button), *Centaurea cyanus*, and poppies were numerous, and their bright colors cheered the eye; two and a half feet beneath this luxuriant vegetation the ground was frozen.

At Råbäck we found the steamer *Gellivara* waiting, and soon after our arrival we steamed down the river. The governor of the province was on board, and I was presented to

him. As we descended, the stream became wider and wider: we stopped at several points, and passed the agricultural school, and in the evening of August 20th arrived at Luleå.

The journey from Qvickjock to the sea gives a fair idea of the water-shed of nearly all the rivers of Sweden.

Luleå, lat. 65° 41′, the most northern town after Haparanda, is situated at the mouth of the river from which it derives its name, and is the residence of the *landshöfding*, or "governor," of the *län* ("province") of Norrbotten, which jurisdiction extends to the most northern part of the country. The town consists of wooden houses, and there are several warehouses, for this is a centre of trade, like all the Swedish towns built at the mouths of rivers, and it is also a sort of *entrepôt* for goods. A large timber trade is carried on, and many vessels are loaded every year. During the summer months everything comes by steamer, for goods cannot be transported in winter by the land route except at enormous cost. The houses are large, many of them painted white and the others red.

The little town is adorned with a large stone church, built in the middle of a square. The interior of the building is very plain. No paintings adorn the whitewashed walls; but over the altar is a large gilt wooden cross, with a crown at the top; and at the base a heart and anchor, with a representation of what I supposed to be laurel leaves. The pulpit is gaudily gilded.

The prison is an octagonal stone building, which has been standing for a number of years, and is surrounded by a plank fence, painted red. The cells are seventeen in number, and of different sizes and shapes. On the upper story are the quarters of prisoners condemned to solitary confinement. The average size of the cells is about ten feet in length by seven feet in width. Hammocks are used instead of beds. Each cell has a little window, strongly guarded with iron bars; and every door has a thick glass, or bull's-eye, through which the watchman can command a view of the interior. I was surprised to find only six persons under sentence, and was told that the greatest number ever known was in the time of the

famine, when there were as many as twenty. The laws are rigidly enforced; disorderly conduct, shouting in the streets, and disturbances at night, fighting, mutilation of trees, violations of the game-laws, disobedience on board ships, disrespect to the police, and many other offences, being promptly punished; and, above all, the theft of any article, however small, subjects the offender to a severe penalty. In summer, when the ports are open, and when strangers arrive in search of work, the number of the prisoners is largest.

The sale of ardent spirits is permitted; and I am sorry to say that the inn was noisy, presenting at times a scene of drunkenness which left a bad impression on my mind. Of course, it is at the worst in summer; for then the sailors, lumbermen, and stevedores make the most of their time while in town; and the prison is often occupied by men merely guilty of disorderly conduct and drunkenness. Order is preserved in the streets by three or four policemen, or watchmen, whose voices are heard at night, and whose duty it is to give an alarm in case of fire.

I was invited to a reception at the residence of the governor, who was a widower, and his daughter, a young lady of twenty summers, was a charming hostess. Almost every lady present spoke English, or some other foreign language. Music and singing formed the chief feature of the evening's entertainment, and every one seemed to try, with unaffected courtesy, to make the stranger feel at home. "You must go and see old Luleå," said some of the ladies. "Will not some of you go with me?" inquired I. I invited two young ladies, and a married one to chaperone them; they accepted, good-naturedly remarking, "We know that in America gentlemen invite young ladies to drive."

The governor showed me his garden, in which he seemed to take great pride. The raspberries were quite ripe; garden strawberries were ripening; currants were getting red; gooseberries and blackberries were still green; beets, turnips, and carrots were in fine condition; cabbages and cauliflowers were yet to come to head; spinach and radishes were plentiful; pease had blossomed and podded.

I remarked the absence of apple and cherry trees, which do not grow in this latitude in Sweden; but dahlias, asters, petunias, dicentra, *Delphinium* (larkspur), Zinnia, *Bellis* (daisy), *Digitalis* (foxglove), *Hesperis* (rocket), *Antirrhinum* (snapdragon), lupines, violets, deutzia, double carnations, tulips, peonies, anemones, lilies, and lilacs were cultivated.

Though only the 24th of August, the days were getting shorter very fast; at 10.30 P.M. the shades of evening were upon us, the stars twinkling above our heads. It was pleasant to see the moonlight again after an interval of three months. Every night had been cloudy since I had left Norway; and at about eleven o'clock the first aurora borealis of the autumn was shining in the heavens. When it appears in this latitude before midnight, it is regarded as a sign of north and easterly winds; and if it appears after, of south-easterly winds.

CHAPTER XI.

Summer Climate within the Arctic Circle.—Vegetation.

THERE is no land, from the arctic circle northward, which possesses such a mild climate and luxuriant vegetation as Norway and Sweden. The countries situated in the same latitudes in Asia or America present a cold and barren aspect compared with the part we have just visited. This climate is due to several causes: the Gulf-stream, the Baltic and Gulf of Bothnia; the position of the mountains which shelter the valleys; the prevalence of southerly and south-westerly winds, which blow almost all the year round, especially in Norway; the long hours of sunshine, and the powerful sun. On the Norwegian side, along the coast and fjords, owing to the genial influence of the Gulf-stream, the spring begins earlier, and the summer is longer than in Sweden; but the days of sunshine are less, as the climate is more rainy; consequently the vegetation does not increase so fast. Summer succeeds winter more rapidly on the Gulf of Bothnia, and vegetation increases almost visibly, especially as the dew is very heavy. Owing to a less rigorous winter on the Norwegian coast, and a longer period of medium or milder weather, several trees flourish to a higher latitude than in Sweden. Rye, which in the arctic circle is planted at the beginning or middle of June, attains a height of seven and eight feet early in August, having reached ninety-six inches in eight or nine weeks, and, when first planted, sometimes grows at the rate of three inches a day. The barley at Niavi was ready for the harvest in the middle of August, six or seven weeks after being sown.

The larch (*Larix europæa*) extends in Sweden a little above the arctic circle, but in Norway farther. The bird-cherry

(*Prunus padus*) grows in Sweden within the arctic circle; in Norway, as far as 70° 20′; and on the shores of the Tana River attains a height of ten and twelve feet, bearing fruit. The mountain-ash (*Sorbus aucuparia*) bears fruit in Norway on Alten fjord, 70°; *S. hybrida* grows as a bush in Norway as far as Tromsö, 69°. The lilac (*Syringa vulgaris*) is seen on the Lofoden as high as 68° 30′. The maple (*Acer platanoides*), horse-chestnut (*Æsculus hippocastanum*), and the buckthorn (*Rhamnus* [*Frangula*]) grow as far as the polar circle; the elm (*Ulmus montana*) grows to 67°; *Cytisus alpinus*, as high as 68° 30′, and the hazel-nut (*Corylus avellana*) at Stegen, 67° 56′, but does not bear fruit there.

The fir or spruce region (*Regio sylvatica*) extends from the coast up to about 3200 feet below the snow-line, but towards the high latitudes the trees increase very slowly, are stunted, and found in bogs and marshes. With the disappearance of the fir, the following plants cease to be noticed: *Rosa cinnamomea*, *Carex globularis*, *Galium boreale*, *Lysimachia thyrsiflora*, *Phragmites communis*, *Smilacina bifolia*.

In the second region (*Regio subsylvatica*) trees continue to grow to a height of 2000 feet below the snow-line. Forests of Scotch pine, sometimes called fir (*Pinus sylvestris*), and of fir (*Abies*), extend in Sweden as high as 68° 30′, and at seven or eight hundred feet above the sea-level. As the land rises they become more stunted, and disappear on the loftier lands. In Norway they are met as high as 70° N.

The third and most characteristic region (*Regio subalpina*) is that of the birch, these trees growing at a higher elevation than any other. The *Betula alba verrucosa* grows at a height of 2000 feet in the southern part, but is not seen in Norway above 64°. The *Betula alba glutinosa*, or highland birch, is found to almost the extreme northern part, and grows in the southern, in some districts, as high as 3500 feet above the sea. The birch often attains a height of eighty feet, a spread of nearly the same, and fifteen or eighteen feet in circumference in the south.

In the fourth region (*Regio alpina*) the birch has disappeared, and the dwarf willow (*Salix glauca*), dwarf birch (*Betula*

nana), and the juniper (*Juniperus communis*) grow to about 1400 feet below the snow-line. The *Arbutus alpina*, *Trientalis europœa*, *Veronica alpina*, *Andromeda cœrulea*, *Pteris crispa* and *Archangelica* are found in the fifth region. Still higher the willows and dwarf birch lose even their bush form; the *Betula nana* creeps along the ground. On the warm sides of the hills are seen *Lychnis* (*Sagina?*) *apetala*, *Ophrys* (*Orchis?*) *alpina*, *Erigeron uniflorum*, *Astragalus leontinus;* and in swamps, *Aira alpina*, *Carex ustulata*, *Vaccinium uliginosum*, even to 800 feet below the snow-line.

In the sixth region mountains never have melting spots on open ground. When the ground is free from snow, a few dark plants grow: *Empetrum nigrum* (without berries), *Andromeda tetragona* and *hypnoides*, *Diapensia lapponica;* on greener slopes, *Gentiana tenella* and *nivalis*, *Campanula uniflora*, *Draba alpina;* in colder places, *Pedicularis hirsuta* and *flammea*, *Dryas octopetala*. The region extends to 200 feet below the snow-line. Still higher up, as we have seen, vegetation shows itself in a few exquisite flowers and the reindeer-moss (*Cladonia rangeferina*), which grows almost to the snow-line, is abundant even at Spitzbergen, 80° N.; spirit has been made from it, as it possesses a small amount of farinaceous matter. The Iceland moss (*Cetraria islandica*) is also abundant, and contains eighty per cent. of digestible substance; it is often used as a substitute (mixed with flour) for bread in bad years.

In regard to cereals, we find that wheat does not thrive within the arctic circle in Sweden, though it does in Norway. The common and the other species of wheat grow as far as Skibotten, 69° 28′ N., and very rapidly; in the south it takes 110 to 120 days from sowing to harvesting. Rye — both the winter and summer varieties — thrives as high as Alten fjord. Barley is also seen at Alten, being planted in the last days of May, in bloom in the middle of July, and harvested at the end of August or beginning of September, yielding tenfold. Oats grow as far as 60° N., and in Alten to 70°; field pease, as high as Bodö, 67° 20′. Potatoes yield well in Norway on the coast, at Alten, and in warm summers even

as far as Skarsvåg, about 71° 4′, and at Vadsö. The climate is colder on the eastern side of the North Cape. At Vardö, 70° 40′ N., they cannot begin gardening or planting before the middle of June, and sometimes not before midsummer; fogs prevail from June to the end of July; August and September are generally clear.

Beets will grow as high as Vardö; also flax and hemp, though not extensively, up to 70° N., in the most northern region attaining a height of two or three feet. Timothy, meadow foxtail, wild oats, and red clover, up to 69° in West Finnmarken; white clover to 70°; and in Vardö, turnips. Carrots grow as far as Varanger fjord, and in Alten they attain a weight of one and a half pounds; parsnips not more than one and a half inches in thickness. Hops ripen as far as Lofoden.

The country is especially rich in berries. The wild strawberry (*Fragaria vesca*) is high-flavored and very sweet, and ripens beyond 70° N.; and in the southern part of Scandinavia, as high as 3000 feet. The wild raspberry (*Rubus idæus*) thrives as far as 70° N., and in the south, to a height of 3000 feet; the arctic raspberry (*R. arcticus*) is delicious, having the aroma of the pineapple. The cranberry (*Vaccinium oxycoccus*) and crowberry (*Empetrum nigrum*) are also found. Many varieties of the blueberry and whortleberry (*Vaccinium*) grow everywhere to 71°, and farther south to a height of 3000 or 4000 feet. The gooseberry (*Ribes*) is found as high as 70° on West Finnmarken, and in Syd Varanger to Jakobs River; it extends in the mountains between the fir and the birch limits. Black and red currants grow wild on the mountains; also the Alpine currant (*Ribes alpinum*), and the Swedish cornel (*Cornus suecica*). The most prized berry is the cloudberry (*Rubus chamæmorus*), growing everywhere as far as 71° N., and found south at 3000 feet above the sea; before ripening it is red, and when growing thickly together it forms a beautiful red *parterre*. The cherry (*Prunus avium* and *cerasus*) ripens sometimes in Norway at 66° N.

CHAPTER XII.

Seasons near the Arctic Circle. — Farm Buildings. — Reception-room and Kitchen. — Habits at Meals. — Holmsund. — Lumber Firm of D—— & Co. — Their Far-sightedness and Philanthropy. — Umeå. — Reception by the Governor. — Agricultural Schools. — A Hearty Welcome. — A Charming Garden. — Native Dishes. — A Religious Scene. — Pretty Names of Women. — Banks. — A Case of Typhus Fever.

From the arctic circle southward vegetation increases rapidly. A great part of the province of Westerbotten is covered with forests of fir and pine trees, the former predominating; these begin on the slopes of the mountains, at a height of ten to thirteen hundred feet, and extend to the sea, a distance of one hundred and fifty miles. The country becomes gradually more thickly settled; numerous saw-mills convert into planks the immense quantity of logs floated down the lakes and rivers; agriculture is carried on in a more intelligent manner; the farm-buildings are larger and well built, and the dwelling-houses are spacious.

Here I have seen at the end of April blinding snow-storms, and have found the little lakes near the sea, such as that of Stöcksjö, near Umeå, frozen till the 15th of May; but, nevertheless, the people were ploughing.

From the 20th to the 24th of May the farmers are busy sowing their grain, both men and women being in the fields. The contents of the refuse heaps of the year, which have been carefully kept, are by the women thrown with shovels broadcast over the land. On the 28th the first swallows made their appearance, and two days after the singing of a cuckoo announced the approach of summer. Inland the season was later; in the Ume Valley, at the beginning of June, there was much ice on Tafvelsjön, and patches of snow here and there at the foot of hills; farther up the valley vegetation was still

more backward; but in summer, even farther north, I have seen superb fields of rye.

The buildings of a farm are composed of detached houses, surrounding a sort of yard; all are painted red when the master is thrifty, and, at any rate, the dwelling-house: kitchen or flower-gardens may be said to be unknown among the regular farmers.

In the reception-room, kept scrupulously clean, the floor is more or less covered with home-made rugs, and a porcelain stove, rounded or square, generally white, reaches to the ceiling, a height of about ten feet. The sleeping-rooms have comfortable beds, and the mattresses and pillows are invariably filled with feathers.

The great room is the kitchen, with its bright open fireplace, which gives light in the evening, and gladdens as well as warms the household; here, of course, the cooking and preparing of the meals takes place, and its furniture is simple and serviceable. Along the walls are sliding beds of plain board, used as seats during the day, and filled with straw or hay for the night; these beds can be opened wide enough to accommodate two or three. The whole household sleep in that same room—brothers and sisters, men and maid-servants; the women always with their skirts on, and the men partly dressed.

In this general living-room poles are secured near the ceiling by the fireplace, upon which in the evening the clothing and stockings are hung to dry. The cellar is under this room, and is accessible through a trap-door in the floor; there the potatoes, beer, butter, cheese, and sundry other articles are kept. In this living-room the every-day company is received; the men smoke, spitting on the floor, which is washed every Saturday, when a general cleaning takes place. Table-cloths are not used, but the board is kept clean; forks are unknown, and plates are rarely used, the bread being used instead. A large bowl of potatoes is placed in the centre of the table, from which each one helps himself; the butter is generally portioned out beforehand, and often the meat or fish; each helps himself also from a large wooden bowl containing sour milk, after shaking it well.

The people, except on extra occasions, change their linen or underclothes once a week, on Saturday evening, after the work is finished. Often the family washing takes place only once in three months, and the amount is then enormous.

On a day in August I landed at Holmsund, at the mouth of the Umeå River—one of the many hamlets whose wharves are packed with millions of feet of lumber ready for shipment. Nothing can give a better idea of the extent of that trade here than the fact that the firm of D—— & Co., of Göteborg, employed at that time from three to five thousand persons in the saw-mills, or in drawing, floating, or shipping timber; the firm had the sagacity to foresee the inevitable advance in prices, and, accordingly, years ago purchased vast tracts of woodland from the farmers, when it was worth but little. The senior partner, Herr D——, has built a church and a school-house for his workmen, pays the salaries of a clergyman and a teacher, and, in fact, has created a village; his people seem to be well cared for, and by their good behavior do honor to his philanthropy. One of the members of this firm, actuated by a commendable public spirit, has borne the chief burden of Nordenskiöld's expedition, which involved a heavy outlay of money.

A few miles higher up is the town of Umeå, lat. 63° 49′ N., inaccessible to large vessels; it is a bright little town, with a population of about two thousand five hundred.

As in Swedish villages generally, I was struck with its extreme cleanliness; its streets were somewhat narrow, and paved with cobble-stones; all the houses were of wood, very long, and well painted, most of them having an upper story. A very fine wooden bridge, built on granite piers, crosses the Umeå River, near which I once counted over ten thousand barrels of tar waiting for shipment. There were numerous shops, for these little towns are the centre of trade for the surrounding country, and for the valleys and rivers at or near the outlets of which they are built. There was an air of comfort and prosperity among the inhabitants, all of whom were dressed like city people, and it was apparent that education had reached even the humblest. Numerous children, coming out of school, showed by their happy faces that their tasks had not been dis-

tasteful to them; Greek, Latin, German, French, English, drawing, music, astronomy, mathematics, etc., etc., are included in the course of study in the high-school.

The fondness of the Swedes for music and singing, even thus far north, was here well exemplified; as I walked through the streets I heard the sound of the piano in almost every house — children practising, while their elders were playing. There were at least one hundred pianos in the place, or one for about every twenty-five inhabitants; but many were not in the best order or of the first quality, as is the case everywhere in small towns.

My reception by the governor of the province was most friendly, though unpretending, except that a servant in livery ushered me into his presence. A portrait of the king and two other members of the royal family adorned the walls; the furniture was plain; there were no carpets on the floors, and everything was scrupulously neat. I was invited to meet a select party of gentlemen at dinner for the same evening. The table was tastefully decorated; in the centre was a melon, which had come by steamer from the south—a great luxury so far north: the *menu* was composed of a magnificent salmon, served whole, delicious corned-beef, chicken, capercailzie (large black grouse), potatoes, green pease and beans, salad, puddings, dessert, and various wines.

The governor proposed two toasts, one being for me, to which I responded in the best way I could. After dinner we descended to a sort of piazza, protected by glass, where cigars and punch were served, and pleasant conversation finished the day; at seven o'clock we said good-bye, my host pressing me to make another visit to Umeå.

Among the most useful institutions of Sweden are the agricultural schools. There are twenty-seven of these *Landtbruks skolor* distributed over the country, besides two agricultural colleges. These schools have greatly contributed to the development and improvement of agriculture, and they are looked upon with much favor by the people of the country, which popularity they certainly deserve. The object of these institutions is to elevate the standard of agriculture, and to teach the

sons of farmers how to improve their farming. The students are required to remain under instruction for two years: the course of study comprises the principles of agriculture and horticulture, the care of domestic animals, the improvement of breeds, drawing, surveying, drainage, carpenter and smith work, carriage-making, forestry, mathematics, agricultural chemistry, meteorology, veterinary surgery, botany, a little of zoölogy and geology, butter and cheese making, the art of building and of making fences and walls. Connected with some of the principal schools are dairy-schools for women, where they go through a year of butter and cheese making. The students, after passing their examination, may, if they like, go to an agricultural college for two years more; but most of them return to their parents' farms with a practical knowledge of farming.

In the schools the instruction is free, but the students give their labor; the expense is borne partly by the province, and partly by the State. The cost at the college, including board and lodging, amounts to about 600 kronor—$175—a year. There is also a forest institute, with six lower schools, for the training of practical foresters. The most northern agricultural school is on the banks of the Lule River; each län generally has one, and in the south, where the population is denser, sometimes two.

The price of a cow in that part of the country that year was 80 kronor, and when hay was scarce, sometimes as low as 50 kronor. A good farm-horse was worth from 200 to 250 kronor, and a sheep from 7 to 10 kronor; 20 pounds of mutton were sold for about 4 kronor; 20 pounds of salmon, in the season, from 4½ to 5 kronor, and of beef from 4½ to 5 kronor for the best quality; butter, 50 öre per pound. A cord of wood, eight feet long, six feet high, and three broad, was worth from 4 to 6 kronor, and hay 50 öre for 20 pounds. The pay of a laboring man was from 1½ to 2 kronor per day, and carpenters and masons received from 2 to 2½ kronor. These were the country rates, but the price of labor has since almost doubled.

I had come to Umeå with Herr Dannfelt, who was on a tour of inspection of the agricultural schools of the North. He was an excellent English scholar, and also spoke French and Ger-

man perfectly; I was indebted to him for many acts of kindness during my sojourn in his country. He was sent by his government as Royal Commissioner for Sweden at the Centennial Exhibition in Philadelphia, where many have had occasion to appreciate his courteous manners. In company with him, the governor of the län, and other officials, we drove to the agricultural school at Innertafle, a few miles from the town. Though it was morning, all were in evening dress, and wore their decorations.

The director of the school, Herr Dr. U——, had received his degree of Doctor of Philosophy from the University of Upsala: that far-famed institution does not confer degrees unless the recipient of the honor has proved his capacity by passing a searching examination, no exception being made in the stringent enforcement of this wise regulation.

The school at Innertafle, which was but a few years old, had under cultivation a little more than one hundred acres of land; but there were about eighteen hundred of unimproved land and forest which were to be gradually reclaimed for tillage, and the rocky and swampy nature of the soil offered to the students excellent opportunities for learning the art of drainage. Blacksmith and carpenter shops were in full operation; the barn was large, and all the out-buildings were very fine. The live-stock of the farm consisted of about thirty head of cattle, besides horses, sheep, and swine, of different breeds; and the results of the intermixture of blood were being observed with great care. Experiments were also made with wheat, which did not seem to flourish well so far north: in Norway, as has been before stated, it thrives farther north than in Sweden.

We were warmly welcomed. I was struck by the appearance of home-comfort of the house, where one could easily see that a woman presided. The parlor sofas and chairs were covered with white linen; the windows were adorned with flower-pots; the floor was so clean that a stranger might almost have been afraid to walk upon it; there was a piano, with a pile of music near it; an American sewing-machine stood near one of the windows; engravings hung upon the walls; little porcelain

figures were scattered here and there; on the table were illustrated newspapers and books; in a bookcase were French, English, German, Greek, and Latin works; and among the practical books in English were essays on "The Art of Taming Horses," and "How to Farm."

From the rear windows there was a view of a garden filled with flowers, strawberries, raspberries, currant-bushes, pease, carrots, and potatoes, with a stretch of green fields beyond. Vegetation was far more advanced here than in Luleå, though the distance was only about seventy miles. The strawberries were quite large, and, with the currants, were ripening; cauliflowers, cabbage, and lettuce had headed; the pease were bearing fully, and melons were growing under glass.

When the examination of the school was ended, we were entertained with a bountiful repast, the lady of the house doing the honors with a peculiar grace and kindness which made every one feel at home, and the remainder of the day was spent very sociably. We had, among others, a peculiar Scandinavian dish—a fish pudding; in Sweden the pike is commonly used, in Norway the cod. The fish is cut in small pieces, and freed from bones, then chopped very fine with butter; after this it is mixed with eggs, milk, flour, and seasoned with pepper and salt, the whole being boiled in a mould for two hours; then it is eaten either with butter, crawfish, or lobster sauce. This dish is very delicious and very light. There was another, called Köttbullar, very popular, made of the best beef mixed with suet, and chopped very fine; after which it is mixed with eggs, milk, powdered cracker, spiced to suit taste, then rolled in small balls, and fried in butter. There was also a dish called Kåldolmar, prepared in the same manner as the one above, but rolled in boiled cabbage leaves, afterwards put in a pot with butter, and cooked on a slow fire till the cabbage has become quite browned. Highly-spiced cold salmon, with its own jelly, is also very much liked.

The weather in Westerbotten and in some of the adjoining provinces is often rainy in the autumn, and in some wet seasons it is difficult to dry the grain without its getting mouldy. The traveller notices, as he passes by every farm, a very con-

spicuous structure, called the hässja, which is used in the provinces of Ångermanland and of Jemtland. The hässja is a curiosity in itself, little used in other parts of Scandinavia, and unknown in any other country. It is used by the farmers for the drying of grain before the final storing of the harvest, and is often of great size. It is constructed of the trunks of

SINGLE HÄSSJA.

trees, set vertically in the ground, at distances of from ten to fifteen feet apart, with holes through which cross-beams are passed at intervals of about two feet. The height varies from twenty to thirty feet, and sometimes more, and the length is proportioned to the extent of the average of the crop on the farm. When the harvest is gathered, the sheaves of grain are placed in the hässja, and left to be dried. The sheaves are piled in regular rows, overlapping each other, and in case of rain do not become wet, while there is a constant circulation of air through the whole mass. Each vertical post is supported by braces, formed of trees of smaller size, so that the whole structure is made firm and substantial. When the structure is empty, standing out from the landscape like a skeleton, its sin-

gular appearance excites the wonder of the passing stranger. Double hässja are also used, built with two rows of beams, covered by a roof, and strengthened by cross-beams. At the end of this is a house in which the grain is stored; they are from sixty to one hundred and twenty feet long. Near or at the end of this structure is often placed the barn, where grain is also kept. The most common way of threshing rye or barley is by spreading it on the planked floor of the hässja, where a heavy roller with long wooden pins, drawn by a horse, is made to pass over and crush the stalks. In small farms the grain is threshed in the old-fashioned way—by beating with a flail.

It is rarely and only in sparsely-settled districts, where good land is very scarce, that one sees a solitary farm in Scandinavia. The people live chiefly in hamlets, not built in streets, but composed of a number of farms at various distances apart; they are thus able to enjoy frequent social intercourse, and can meet for innocent amusement, rendering their lives more cheerful, their hearts warmer and more charitable, and their habits less morose.

When travelling in the Western and even in some parts of the Eastern States of America, I have often had a feeling of sadness, as I saw the farms so far apart that at some seasons of the year the inmates of each must remain entirely by themselves for weeks and even months. Solitude, or practically solitary confinement, often unsettles the mind, and leads to insanity. Man requires a certain amount of social intercourse, of work, or exercise, mingled with recreation, in order to be in perfect health; any excess of one or the other becomes injurious to him in the course of time, and sooner or later he has to pay the penalty of any violation of the laws of nature.

Many times the people are glad of an occasion for a frolic. As I came to a farm, sometimes, I was welcomed by the farmer with the words, "Paul, you have come just in time; I am going to raise a hässja to-morrow, and all the neighbors will be here to help me; won't you come and help us, also? Afterwards there will be a kalas (feast)." Of course I consented gladly.

The day appointed we were on hand. The heavy ropes and cords were on the ground, and the hässja was raised after some three hours' hard work. All were then invited into the house, where a bountiful repast had been prepared by the wife, who welcomed us. As an appetizer, a glass of bränvin had to be taken, and beer and coffee were not lacking. Gradually the farmers became more lively and sociable, and all were happy and contented.

On a Saturday afternoon many of the farmers dress themselves in their best, and drive to the towns to buy provisions, not omitting to get a bottle of bränvin, with which to treat their friends and themselves during the week.

At a hamlet where I was staying a pedler arrived with his wagon and goods, to remain three or four days. He took up his quarters at one of the farms, spread his goods in one of the rooms, and then was ready for business. He was, besides, a *läsare*, a pietist, or sensational preacher, and wherever he went he held meetings, and exhorted and prayed with the people. At one of his stated hours I went to hear him, and found among the audience several women under very great excitement. One was in a violent fit of hysterics, crying loudly, and shouting that she felt that her sins were not forgiven, and that she would go to hell! Two or three of the cooler women were trying to pacify her by telling her that God forgave all sinners who believed, and came to him through the Lord Jesus Christ. In the mean time this maul-text preacher was reading in a loud voice verses of the Bible, always to be found appropriate for such occasions by a forced literal interpretation, to frighten her more and more, now and then putting in a hopeful text about forgiveness of the repentant. The poor creature remained in that dangerous state of excitement more than two hours, until she became calm from exhaustion, and left, accompanied by some of her friends, satisfied at last that her sins were forgiven.

All the women of the place seemed to be crazy after this preacher; but the men said nothing. Similar scenes, I am told, often occur in these country hamlets, especially in the winter, when people have nothing to do. Such preachers do a great deal of mischief, and no permanent good.

The women had pretty names, and always two—such as Maria, Olivia, Sara, Clara, Josephina, Christina, Carolina, Augusta, Lovisa, Gustafva, Engla, Cathrina (Catherina), Anna, Carin, Erika, Mathilda, Margareta, Albertina, Eugenia, Brita, Evelina, Eva, Magdalena, Ulrika, Kajsa, Sophia, Nina. The men have fewer names, among the most common of which are Gustaf, Olof, Anders, Carl, Johan, Erik, Nils, Elias, Pehr, Zachris, Thomas, Jonas, Frans.

On my return to Umeå I found that my exchequer was very low—a discovery that was far from being agreeable, as I had no letter of credit upon the bank of the place or anybody else, and Stockholm was five hundred miles away. Happily there was a telegraphic station here, and I sent a message to Stockholm to my bankers to telegraph to some one here to supply me with money. An answer was soon received, complimenting me with unlimited credit.

This establishment was a plain wooden building, without window-shutters, though it sometimes contained a large amount of money: evidently burglars had a bad time in this country, and did not dare to attempt to capture the booty. The president and the officials of the institution received me with that consideration which rises in proportion to the amount you are credited with—not unlike the custom in other countries. Reader, just think of my reception!

Somehow or other the news had spread in Umeå that I had bought large areas of forest, and my astonishment was great when the director of the bank asked me if I wanted thirty or forty thousand dollars; and when he told me the reason why he thought I required so much money, we had a good laugh over this idle gossip. A few hundred dollars was all I required.

My voyage up the Ume valley had been a subject of great talk. At that time Scandinavia was scoured in every direction by speculators, rich and poor, from the cities, eager to buy forests, even groves of trees. It had become a perfect mania: if they only could buy the trees without the land, their fortune, they thought, was made. Happy were they if the farmers were willing to sell their woods. At first many sold them

cheaply; but in course of time the value increased, and the more wide-awake ones who had not sold were now masters of the position, and obtained enormous prices, which kept increasing every day. At last the bubble burst; hard times reached Scandinavia, and the speculators in timber found that there was a limit to the price, at least for the present.

One day, as I entered a dwelling where typhus fever had attacked the family, a sad spectacle met my eyes. One of the children, a girl of about ten years, was expiring in her mother's lap, and even as I looked the breath of life departed. The mother caressed her child, and the neck, not yet stiffened by death, allowed the head to sway to and fro, as she passed her hand through the fair silky hair; but gradually the motion became less and less, and then she began to realize that her child was dead, and, though not a tear fell, the pangs of intense sorrow could not be concealed. To make the desolation of that home still greater, on a bed close by was another daughter, sick with the same disease, and looking so pale that it seemed that she was soon to join her departed sister. The smile of merriment had left me as I crossed the threshold.

"Have you seen the doctor?" said I.

"Yes, and he gave me a prescription, and it has done no good."

"Has he seen the other child?"

"No."

"Why have you not sent for him?"

"I am so poor," said she.

I remembered that I had in my luggage some medicine, which my beloved and now departed friend, Dr. F. L. Harris, had given me when he shook hands with me on board the steamer, on my departure from America, with the admonition, "take good care of yourself, my boy!"

"I will come back," said I, "and bring you some medicine for the other child, whose life I hope will be spared to be a comfort to you in your old age."

The medicine I gave was most beneficial, and before I left the province the child had recovered.

CHAPTER XIII.

Provinces South of Westerbotten.—Ångermanland.—A Beautiful River.—Örnsköldsvik.—A Picturesque Coast.—Hernösand.—Leaving Hernösand.—A Charming Road.—Rural Scenery.—Agricultural School at Nordvik.—Fine Buildings.—Students' Quarters.—Regulations.—An Hospitable Welcome.—A Dinner.—The Hostess.—Honesty of the People.—Improvement in Vegetation.—Apple-trees.—The Hamlet of Nora.—Changes of Temperature.—A Social Gathering.—Ascending the Ångerman River.—A Fine Farm.—Large Hässja.—Butter-making.—Harmånger.—The Parish Church.—Epitaphs in the Graveyard.—How the Poor are taken care of.—A Funeral at Njutånger.

South of Westerbotten are the provinces of Ångermanland, Medelpad, and Helsingland, situated between 61° and 64° of latitude. They are dotted with beautiful lakes and rivers, and forests cover large areas; the shores are indented with numerous bays and fjords, on the sides of which, near the sea, many picturesque towns and villages are nestled. After wandering among their woods and dales, and paying a visit to their hamlets and farms, we will cross once more the peninsula of Scandinavia from sea to sea, and compare its vegetation with that of the country farther north.

Ångermanland is a beautiful province, and many of its valleys are very productive. The Ångermanelfven, running through its whole territory, is the deepest river of Norrland and of Sweden, and may be ascended by steamboats as far as Nyland, a distance of nearly sixty miles, and by small craft to Holm, thirty miles farther.

The most northern place of importance on its coast is the village of Örnsköldsvik, in lat. 63° 15′, among the hills at the end of a fjord, with a population of 600 souls. It is composed of one main street, with large and commodious houses, two or three of which are about one hundred and fifty feet in length, and from forty to forty-five feet in width; most rest

on well-cut granite foundations, and are painted white or of a light yellow. There are several good stores, a telegraph station, a hotel, and a small public garden.

On the coast south of Örnsköldsvik the scenery increases in beauty, and as far as Sundsvall the coast is the highest in Sweden; numerous islands dot the sea along the shore, the principal ones being North and South Ulfö, inhabited by a few hundred fishermen.

The principal town and port of the province is Hernösand, on the island of Hernö, in lat. 62° 36′, with a population of 4700. It is finely situated on the declivity of a hill, and has some handsome residences; it is the seat of a governor and a bishop, and a court of justice, and its position near the entrance of the river Ångerman gives it commercial importance.

Not far from that city is the agricultural school of Nordvik, to visit which, on the 28th day of August, I took passage on board a little steamer. The morning was superb, the water without a ripple, and the air had the peculiar dry, cool property which gives strength to the weary and health to the sick; a light overcoat was necessary, for the mercury on deck was at 53°. After a sail of over an hour I landed, and found the director of the school waiting for us; we drove through a lovely country, on an excellent road which skirted the fjord. A light, cool breeze, laden with the fragrance of the pine, the fir, and the wild flowers, blew over us; birds and butterflies were flying about, and rivulets of clear water ran rippling by us, on their way to the sea: the road was bordered on either side with short grass filled with dandelions in full bloom. As we went up and down hill after hill, fjords, islands, vessels, woods, farms, meadows, and cultivated fields came successively into view.

The Nordvik school is an older institution than that of Innertafle, previously described, and is in a much more fertile and more thickly settled district; horticulture, therefore, has more scope, and experiments with different kinds of grain could be prosecuted with better results on account of its more southern situation.

The farm buildings were commodious, with an immense barn, about two hundred feet long, and broad in proportion. On the ground-floor were the stalls for the cattle, with a gutter, from which every particle of manure was conveyed to an adjacent shed, where it was kept from contact with the rain; also, a large space for carriages, carts, ploughs, and other farming implements; on the other side the grain was stacked.

The number of persons under instruction, as at Innertafle, was twelve; their quarters included a kitchen, a dining-room, a study-room, and bedchambers—all remarkably clean. At noon they came to dinner; they were strong, healthy young fellows, with faces reddened by exposure. I found that the students here were more advanced in writing than those of the first schools I had seen, and had received a better preliminary education; and I observed a continual improvement in this respect as I went southward through the richer districts. These young men, by study, work, and thrift, were preparing themselves for the life they intended to pursue as tillers of the soil—a noble vocation; they wanted to raise agriculture to a higher standard, and to keep up with the march of progress.

This school had only sixteen cows, but the breed was rapidly improving in appearance as well as in value. One of the cows had given in a year five hundred imperial gallons of milk, two and a quarter gallons making, on the average, one pound of butter: an accurate account of the quantity of milk given by each cow is kept, especially when the breeds are crossed, in order to ascertain the degree of improvement in the amount and quality of the milk and butter produced.

We were invited to partake of what the host called a country dinner, somewhat unlike those I had before seen. A large bouquet adorned the centre of the table, and the butter was surrounded by beautiful flowers; at one end was a silver bowl containing powdered sugar, while on the other side a silver holder supported a crystal dish, filled with raspberries just plucked in the garden, and a plain china pitcher was filled with delicious cream. The meal was chiefly eaten standing, and was a combination of the smörgåsbord and dinner on the

same table. After eating the dishes composing the smörgås-bord, a delicious vegetable soup, mixed with milk, was served, after which I helped myself, like the rest of the company, to raspberries and cream, thinking that the dinner was over, and that we had come to the dessert; but, to my utter astonishment, another course appeared, consisting of some large capercailzies, and after this a pudding. The beverages were milk and beer.

The hostess, who was rather tall in stature, with flaxen hair, soft blue eyes, and fair complexion, wore a light-colored print dress, made high in the neck, and fitting like a glove, with black trimmings, the only adornments being a lace collar and a black velvet ribbon fastened round the throat by a small gold brooch; a black silk net, through which the hair appeared still more flaxen, completed her toilet. Two maids assisted her, but her personal attention was given exclusively to her guests, upon whom the daintiest dishes were pressed with a soft voice and a charming simplicity of manner.

The traveller sees everywhere proofs of the honesty of the people. Though the house was on the highway, there was not a person visible when I entered the place, all being at work in the fields; the doors had been left wide open, and in the bedrooms watches were hanging on the walls: near the beds the students had hung portraits of their fathers, mothers, sisters, sweethearts, and friends.

A marked improvement in vegetation was apparent; although only eighty miles south of Umeå, the experimental gardens contained several apple-trees, growing the farthest north of any in Sweden, in about lat. 62° 40′. The fruit was small, but some of the trees, which were yet young, were overladen with it. This hardy species of apple comes from Russia, and is becoming acclimatized in this part of Sweden; it would probably grow well in the northern section of the United States. There were also several cherry-trees, with ripened fruit; gooseberries were maturing, strawberries were fine, and the vegetables were far more advanced than any I had previously seen: wheat and flax were cultivated, and the latter is exported. A breed of large horses, used by brewers, is raised in the district.

In the afternoon we took a drive to the hamlet of Nora, about three miles from Nordvik. Leaving the high-road, we passed through a valley, in which were scattered numerous farms, a small river adding to the charm of the landscape. We saw some rich fields of barley and flax—the latter being planted extensively, as linen is woven by the farmers for home use; the reapers were engaged in mowing the barley, while lads and girls where tying it in bundles. The large snow-ploughs along the road reminded us that this smiling picture was soon to pass away, and that winter would give another aspect to the landscape; indeed, so great was the change that I did not recognize the place at a later period, when on my way to the far North, and I inadvertently passed the Landtbruks skola without stopping to thank those who had been so kind to me.

The end of our drive was the little Nora lake, near which stood the church and the parsonage, while in the distance was the residence of the school-master. The red school-house was near the road, and thirty or forty log sheds, built close together, were intended to shelter horses from the winter winds and snow-storms while the people were in church.

I was surprised at the great change in temperature; sometimes we drove through a warm atmosphere, which was succeeded by a cold wave, and that again by a warm one. The weather grew cooler. At 7 P.M. the mercury stood at 50°, falling at 8 P.M. to 46°, and at 10 P.M. to 44°; though in the afternoon the temperature had been 59° in the shade, and 114° in the sun.

In the evening the pastor of Nora joined us, and his presence was welcome to all; for it is one of the characteristics of the Swedish clergy that they mingle in the pleasures of the people among whom their lot is cast, witnessing their simple dances, and enjoying their social gatherings. The clergyman is often seen looking on with a smiling face, happy at the sight of his merry and contented flock, and he is often considered an integral part of the family. I was always delighted at such scenes; for it was evident that a good moral influence was thus exerted over both clergyman and people, producing in the latter a pleasant restraining effect, and giving to the former an

insight into the heart which no man can have unless he mixes with humanity.

Leaving Nordvik, a drive of three-quarters of an hour brought me to Hornön, where we were ferried across the river to take passage on the steamer which ascends the Ångermanelf. The country became more and more picturesque as we sailed up the river, on whose terrace and alluvial soil were numerous farms. In the afternoon we reached Holm, the highest point of steam navigation, where we learned that white frost had occurred for three consecutive nights.

Not far from the landing, on the left bank, is one of the largest farms of Ångermanland, where, with true politeness, its owner was waiting to receive us. I was invited to become a guest at the farm-house, a mansion two stories high, about one hundred feet long by forty-five wide, with a sort of Mansard roof. At this farm there were about seven hundred acres of land under cultivation, the principal crop being barley.

On a small island near, containing about one hundred and fifty acres of pasture-land and woods, a herd of cattle belonging to the State had been let loose for the summer; they appeared overjoyed at our presence, running towards us, the goats and sheep joining in the frolic, and we caressed all as we pleased. The animals of a Scandinavian farm are always tame, on account of their being petted and treated with the utmost gentleness.

There were eighteen large out-buildings, separated from each other, as a precaution against fire, which in America would have cost a large amount of money. One of the hässjas was the largest I ever saw, to accommodate the large amount of grain harvested every year. It was one hundred and eighty feet long, and of great height; and not far from it was another, about one hundred and ten feet long, forty broad, and thirty high, which had eleven cross-beams supported by twenty other beams, placed vertically, with a large area in the middle, used as a threshing-floor. This was the first farm I had seen in the North with an ice-house; the ice was not used exclusively as a luxury, but was also employed for dairy purposes, the milk being surrounded by water at a uniform temperature of

42°. This is considered better than to keep the milk in a running spring or in a cold room, the cream never souring and the butter being much better, and is now used on many dairy farms.

After wandering in Ångermanland and in Medelpad I entered Helsingland, sailing along its coasts, driving along its shores, and spending some time at its comfortable farms. Its two chief towns are Hudiksvall, a seaport, in lat. 61° 50′, with a population of 3700, at the extremity of a fjord; and Söderhamn, in lat. 61° 25′, with a population of 6200, not far from the outlet of the river Ljusne, which rises among the mountains of Herjeådal and traverses the whole region. This province abounds in large forests, swamps, and bogs. Inland a number of the inhabitants are descended from the Finlanders. A high-road, passing through this district and Herjeådal, leads to Röraas, in Norway.

While travelling in this part of the country, one afternoon I halted at Harmånger, near the sea, before a farm, whose buildings formed a square, entered through a porch. On inquiring if I could remain for a few days, I was welcomed, and a maid conducted me to one of the guests' rooms up-stairs. After a simple repast, I went to the parsonage, where I was kindly received by the pastor, who at that time was preparing the youth of the parish for confirmation; he was an excellent man, and insisted that I should often take my meals with him and his family. When we went to visit the church he took the key with him. The keys here are always very large, especially those of the churches, the locks of which are often very old. This one was at least a foot long, and of such calibre that, by piercing a hole in the tube, it would have made a very good pistol of large size.

The old church of Harmånger was built of rough stones of different sizes, and, as usual, stood in the midst of the churchyard, enclosed by a stone wall. Two high ladders were resting on the roof, for there had been an addition to the edifice, one part being much older than the other. Near it was a tower about twenty feet square, whose very thick walls were smooth outside, but very rough and unfinished inside, the

stones being large and uneven; no one knew when or by whom it was built, and the pastor said that it dated from heathen times, and was probably used for sacrifices: the entrance was through a queer-looking stone-roofed porch.

As I wandered among the graves, reading the epitaphs, I could see the simple and strong faith of the people. The following are specimens:

"Farewell! now will I sleep and live in the home of peace."

"Oh ye be soon welcome to the same good rest. Delightful is the couch of repose, and the night is soon passed; farewell, my heart says. In the heavens we shall meet. Now all my thoughts I turn, oh Jesus Christ, to thee."

"Into thy merciful hands I commit myself. Now I can depart from sorrow, vanity, and want, and forever be with thee, oh Jesus Christ."

The altar is old, of wood painted and gilded, and over it is a representation of an angel with clasped hands and golden hair, surrounded by clouds, on the top of which is seated a lamb, holding between the forelegs a cross: the lower part of the angel is partly hidden by rays. On the left is a full-size representation of the Saviour, with ghastly wounds in his side, who holds scales, in one of which is a bleeding heart, in the other a sword. On the right is a representation of a female figure, holding in one hand a cross, and in the other the Bible; at the bottom of the cross is an anchor: under her feet stands a child (to illustrate darkness), and not far off an overturned jar, containing gold pieces. Over two windows are cherubim, one with a trumpet and a crown, and another with a palm-leaf and trumpet. There is also a large cross, upon which is an ugly representation of Christ crucified, covered with blood. These pictures date from before the Reformation, but the pulpit is modern. Old slabs stand in front of the altar, on one of which is the date MDC.: XXII., and on the other 1669–1691, with inscriptions in Latin.

Here I met with old Scandinavian names: Erik, Carin, Brita, Olof, Lars, Ingre (Inger), Ingrid, which were very rare further North.

The poor of this parish were taken care of in a very peculiar manner. While chatting at one of the houses an old man

entered, dressed in a suit of new clothes, and wearing a high silk hat, and was bidden to take a seat: when, upon inquiry, it was whispered in my ear that he was a pauper, I could hardly believe it. In some parishes the people prefer to have no poor-houses, as there are very few paupers. Each person who has to be supported has to prove before the Häradsting that he is too old or infirm to work; then he goes and remains six days on every farm of the parish. I was surprised to see how kindly they were treated—in many instances like visitors—having better food than that daily used by the family, and a good bed: and so they go from one farm to another. They are well cared for, for it would be a great disgrace if the report should spread that Farmer So-and-so was hard-hearted to the poor. It sometimes happens that a man is not fully able to provide for his wants, from imbecility or other cause; in that case the authorities of the parish make arrangements with some of the farmers to pay a fixed sum annually, stipulating what kind of labor the man may undertake, which is generally to tend the sheep or cows, split wood, draw water, or, in a word, make himself useful in a small way. They think this system less demoralizing than that of the poor-house; but it is sometimes attended with great inconvenience, for I saw in one instance a person so old and imbecile that he was not far removed from the brute in slovenliness, and caused much discomfort to the families who had to take care of him in their turn.

A little farther north you enter the picturesque parish of Jättendal.

On a Sunday morning, as I came to the church at Njutånger, I saw near the gate, just outside of the burial-ground, a coffin containing a dead child; the lid had not been put on, so that the neighbors and friends might take a look at the departed: the body was literally surrounded with flowers. In a group near by were several girls and women dressed in black, with white aprons, cuffs, and collars; they were the nearest relatives, and their dress was a sign of deep mourning. Some lads —the pall-bearers— wore a white muslin band around their arms above the elbow; two men had each a little bunch of

flowers in their button-holes. After awhile the clergyman came in his robes, and the service of the dead began; the men stood sorrowfully on one side, the women on the other. At the end of the ceremony the clergyman cast three spadefuls of earth over the coffin, and then went into the church for the performance of the ordinary services.

In Helsingland, as well as in other provinces of the North, the cultivation of flax is common, and the women are expert in the manufacture of linen. Here many of the homes of the peasantry are pictures of thrift, which delights the eyes of the stranger, who is reminded forcibly of the by-gone days of his own land.

Entering a house, I found myself in the large room, and saw two old-fashioned large looms—the same kind that has been in use for generations—and at one of these a daughter was weaving linen; near her on a chair lay a large roll of fine cotton cloth, which had been woven by a sister for dresses for the family. She was an expert, and could manufacture twelve *alnar* (24 feet) a day. At the other loom the mother was weaving a coarse woollen stuff for the winter clothing of her husband and boys, who were to have new suits on Christmas. Two of the younger daughters were busy at the spinning-wheels, while the servant-girl was carding wool.

We will now leave Helsingland on our way towards Jemtland, and thence to Norway.

CHAPTER XIV.

From Östersund to Norway.—Houses of Jemtland Farmers.—Landscape on the Road.—A Drove of Cattle.—The Town of Östersund.—A Trusting Landlady.—Frösö.—Grave-diggers.—Departure from Östersund.—Immense Forests.—Game.—A Picturesque Country.—An Intelligent Horse.—Åreskutan.—The Norwegian Frontier.—Descent towards the Sea.—Superb Scenery.—An Old Farm.—Levanger.—A Fruitful District.—Trondhjem.

THERE are several high-roads from the Baltic westward, converging towards the town of Östersund, in Jemtland, and thence to the Norwegian city of Levanger, and Trondhjem, on the North Sea, thus crossing the peninsula from sea to sea; from Hudiksvall the route traverses the whole length of the province of Helsingland, from Sundsvall through that of Medelpad, and from Hernösand, skirting the Ångermanelf, and crossing the Indalself to Östersund.

The most direct route is by way of Sundsvall, the distance to Trondhjem by this being over five hundred miles, but the road from the former place is at first tiresome and sandy; the most picturesque road is from Hernösand along the Ångerman River. There will soon be direct railway communication between the two cities.

On the 29th of August, passing through a beautiful country from Holm, I arrived at the hamlet of Sollefteå, where a fair is held twice a year, and was housed for the night at a very comfortable farm. All the way from the sea I had noticed that winter rye was raised more extensively than barley, but both crops seemed to be ripening at about the same time; oats were backward, requiring about ten days longer to mature, for the summer had been cold; the currants were ripe, and the carrots, turnips, beets, and pease looked well.

The next morning I reached the hamlet of Forss, on the banks of the Indalself, over a fine road from the Ångerman-

elf. I saw no hässjas, for the grain in this district is dried and stacked in the open air; the winter rye was cut, the barley was fast falling under the scythes of the reapers, the oats were getting yellow; on the coast there were fields of hemp, which is spun for the manufacture of fishing-nets and cord; potatoes were abundant, and each farm had its patches of hop-plants, used by the farmers in the brewing of their beer. Immense boulders were scattered over the face of the country. A few of the houses were painted white, but most of them red, with white borders around the windows and the corners, and a white strip following the line of the roof.

The hamlets are scattered wherever the soil is fertile, and the luxuriant waving fields and meadows appear the more cheerful, as they are separated often by large tracts of rocky or forest land. The houses of the well-to-do farmers of Southern Ångermanland and Jemtland are exceedingly clean. Many farms have two dwelling-houses, one of which is not occupied by the family, but always kept in perfect order; one house is used in summer, and the other in winter—"giving time to one to rest," as the people sometimes laughingly remarked.

The landscape was continually changing from charming tracts of cultivated land, the solitude of silent forests, smiling shores of lakes, dreary marshes, to now and then a glimpse of a white foaming stream dashing against rocks and boulders which lay in its course.

The cold nights — the mercury standing at 42° — showed that the summer had ended, though during the day the sun was quite warm, the mercury often standing at 68° in the shade at 1.30 P.M.; the swallows were massing together, preparing for their migration southward, and the cattle were returning from Norway.

We met a herd of about two hundred cows following a girl, whose shrill cries constantly urged them on; a short distance behind came twelve horses, led by a man whose vocation was evidently that of a cattle-driver. One of the horses turned and followed us, in spite of our endeavors to prevent him; we had to stop and give him in charge of a man who was passing in the opposite direction. Then we came to a flock of

sheep, which, as soon as they saw our horse, turned about, and at a quick trot went back to the old woman who was their shepherdess; she had in her hands a stocking, which she was knitting as she walked, but stopped her work to pacify the frightened animals, talking to them until we had passed.

The road then passed through long stretches of forest, the farms were fewer and the soil more barren. Some of the post stations were very clean and comfortable, but the food was plain. In one of the farm-houses the walls of the parlor were covered with blue paper of a small pattern; the curtains were of snowy muslin, and there were two sofas, a rocking-chair, a bureau, a table in the centre of the room, a portrait of King Carl, and a little painting representing the farm; adjoining was a bedroom, the furniture of which was made of highly polished pine, looking very much like satin-wood, so fine was its workmanship; glass candlesticks, placed on either side of the looking-glass, contained wax-candles; the floor was of bare pine, but clean and bright; the floor of the dining-room was partly covered by strips of home-made carpet, each about two feet wide, laid the whole length of the floor, and forming a contrast to the intervening spaces of wood, which could not have been made cleaner or whiter.

On the last day of August I came in sight of the Storsjö (*sjö* meaning lake), two or three hundred feet below me. The sun was near its setting, and its declining rays gilded the hills, and the dark woods of pine and fir; the shores of the lake were doubly golden with fields ready for the harvest; the sails of a few boats were visible, and a small steamer was ploughing its way towards the different hamlets.

On the eastern shore is the town of Östersund, in lat. 63° 24′, with a population of 2500. The stars were beginning to shine as I drove through its streets. I could find no room at the hotel, for the place was full of strangers, who came to attend a railway meeting. Much enthusiasm was displayed, as the people wanted the road built from Sundsvall to Trondhjem, across the peninsula, and the proposed line would necessarily pass through the heart of the provinces of Jemtland, and tend to develop its resources.

The landlord obtained lodgings for me at a neighboring house, where the sole drawback was the overtrustfulness of the landlady, who, in order to show her confidence in her guest, spread before me all her little treasures. In the evening, when I took possession of the pleasant room assigned to my use, I found on the bureau, in a little cup, her gold ear-drops, rings, a watch, brooches, and sundry other valuable articles, and not a drawer was locked; everything showed trust in me. I was ill at ease, however, for I did not know but that some of the servants or other persons would help themselves, and suspicion thus be cast upon me: two or three times during my stay I fancied the good woman shot towards me an inquiring glance, which made me think something had been stolen or was missing, and that I was suspected; but it was all imagination. It is not the custom of the country to secure anything under lock and key; indeed, no servant would have been willing to stay in a house where they were mistrusted. When I left the place I asked my landlady to see that all her property was safe. It takes some time for one who has been living in a large city to get accustomed to the honest ways of such unsophisticated country folks. I have often stopped in villages and towns of Sweden and Norway when none of the occupants were at home, but the key hung on a nail outside the door; and even when the family had gone upon a journey it was left there, so that in case of an emergency the neighbors might enter.

Two days after my arrival the post brought me a gold pencil-case which, in my hurry, I had left behind at the hotel in Hernösand: I had hardly left when I discovered my loss, and had made up my mind that I should never see it again; but when I spoke to my companion, he said, in the coolest way, "We will write to have it sent to you at Östersund:" the idea did not occur to him that it would be pocketed by any one, and he was right.

There is no striking peculiarity in the costume of the people, but some of the girls wore a kind of turban, which with some faces was becoming, as seen in the picture.

A dinner was given by the governor in honor of the railway

meeting, to which I was invited. There were thirty guests. There was no set table. The hostess did the honors in an affable and unaffected manner. In the evening there was a reception, with music and dancing, the governor being passionately fond of music, and himself a good performer; he and three of his friends were the musicians, the instruments consisting of three violins and a violoncello, with a piano accompaniment by the hostess and one of her friends. The national habit of courtesy caused a complete suspension of conversation. Later, refreshments were served in the garden, which was illuminated with Chinese lanterns. Choruses were

JEMTLAND MAIDENS.

sung in the open air, and, as we returned to the house, the host headed the procession while all sung. The reception closed with dancing, the favorite dance being the very rapid Swedish waltz.

The governor and his wife were attentive to every one. There was no servility of manner, but all were courteous; no one presumed upon his official position, civil or military rank, birth, knowledge, or wealth. If the inclination existed it was carefully concealed, for education and native courtesy checked the tendency towards such small exhibitions of vanity.

The Storsjö is a very picturesque sheet of water, 983 feet above the Baltic, nearly in the centre of the province, and is

one of the most lovely lakes of Sweden, its landscape being characteristic.

Close to Östersund is the pretty island of Frösö, rising 500 feet above the lake, and connected with the main-land by a bridge 1296 feet long. Here is a Runic stone, with the inscription, "Erected to the memory of Ostmadur Gudfast's son, who first christianized Jemtland." Frösö *kyrka* (church), on the highest part of the island, is built of stone, and is one of the oldest in Sweden. At the entrance the walls are about nine feet in thickness, and at the window seven or eight. Not far off is a wooden belfry, "Klockstapel," and the church-yard surrounds the edifice. As it was Saturday, the graves had been decorated with flowers by relatives or friends, according to the beautiful Swedish and Norwegian custom. On many of the tombs of the poor, garlands and bouquets of wild-flowers had been cast by survivors who had no other flowers to give. Hours had been spent in the woods and meadows, that morning or the evening before, in their search, and the part of the graveyard which lay next to the road appeared almost like a parterre of flowers. As I wandered from grave to grave, reading the epitaphs, my attention was arrested by an inscription which showed that three *syskonen* (brothers and sisters) lay buried below. The words inscribed upon a scroll at the head of the grave were these:

SYSKONEN.

ARVID ERLAND BEHM.

Född den 17de Maj, 1855; död den 1ste Jan., 1858.
Born the 17th of May, 1855; *died the 1st of Jan.*, 1858.

ARVID EMANUEL.

Född den 20de Febr., 1861; död den 1ste Juni, 1864.
Born the 20th of Feb., 1861; *died the 1st of June*, 1864.

EMILIA VIRGINIA MARIA CHRISTINA.

Född den 24de Febr., 1863; död den 25de Maj, 1864.
Born the 24th of Feb., 1863; *died the 24th of May*, 1864.

Little Arvid Erland had died just as the year was budding; he was not three years old. Emanuel had gone to rest the first day of June, when the sun here begins to be warm, the flowers to bloom, and the birds to love and sing. Emilia went to

sleep on her mother's breast, without saying how much she had suffered. But the little ones had not been forgotten, for three large bouquets were over their resting-place. Birds were singing, bees and butterflies were flitting to and fro over the graves, and all nature smiled. A gentle breeze from the lake wafted the perfume of the wild flowers and the pines over this last home of man.

FRÖSÖ CHURCH.

Hearing voices and a strange sound, as of some one digging, I went to the other side of the church, and there found a contrast to the scene I had just witnessed. The flowers were scarcer, the little mounds over the graves had been neglected and were going to ruin, and farther on there were no flowers to be seen. This was the resting-place of those who had died long ago, and they were forgotten. One side of the churchyard was a parody on the other. I again heard voices and the sound of the spade, and I saw two grave-diggers. The

grave they were digging was long, broad, and deep, for they were making room for more of the dead, the church-yard being full. At my feet lay the mouldering remains of a woman. As I looked at them, I said, musingly, "Woman! is that all that is left of thy beauty? Where are thy beaming eyes—mirror of thy thoughts—that told of thy love, sorrow, or anger? Where are those smiling lips, that kissed so lovingly? Where is thy comely cheek, that flushed and paled, and told so well the secrets of thy heart? Woman! where are thy gentle hands, that caressed so softly, and took away care, and sorrow, and pain? Where are all thy winning ways, that made strong men weak before thee? Is that grim sight all that is left? Why have they disturbed the couch where loving hearts once laid thee?" No answer came back. All was silent: it was the garden of the dead!

In Sweden and Norway graveyards are consecrated ground, and are not enlarged. The people of the same family are generally buried together, and there must be six feet of earth over the grave, a little mound marking the spot. When the graveyard is full, the old graves are opened, and the bones are collected and placed in the bone-house—a building constructed for the purpose, which I have sometimes seen partly filled with these relics of humanity.

The beauty of the scenery culminates near the church and by the school-house, from which twelve churches can be seen. The view was most extensive. I stood by the old edifice motionless for awhile, for the natural beauty of the surroundings was unlike any other Swedish landscape I had seen. In the far distance, towards the west, the outlines of the snowy mountains looked soft and hazy; the lake lay below, with its clear water studded with charming little islands, covered with dark fir or pine, and its shores indented by little fjord-like bays, penetrating deeply inland; the hills and trees mirrored themselves in the water, and beyond were dark forests; the banks sloped gently downward; red farm-houses were scattered everywhere, in the midst of golden fields of grain and meadows.

Jemtland is one of the largest inland provinces of Sweden,

extending westward as far as the frontier of Norway. In some parts it rises from 600 to 2000 feet above the sea. Often one sees, as far as the eye can reach in all directions, nothing but one dark, superb mass of trees, with hill after hill clad to the very tops with pines and firs. There was something very imposing in this vast sombre tract of country; while the blue sky above and the snowy white clouds formed a strange contrast to the millions and millions of trees.

Many of the valleys are very fruitful and well cultivated; but in the higher regions are vast tracts of barren land. In the recesses of these forests is found the elk or moose (*Alces malchis*), somewhat smaller and with narrower horns than the American moose (*A. americanus*). Wild reindeer (*Rangifer tarandus*) also roam in the bleak mountain region. The glutton or wolverine (*Gulo luscus*), foxes, and wolves, in some districts prove troublesome to the flocks. Bears (*Ursus arctos*) roam in the forests, and destroy annually a considerable number of cattle and sheep, and sometimes even horses. They attain their largest size and greatest number in Jemtland, Wermland, and Dalarne, and in Central Norway, almost equalling the grizzly bear (*U. horribilis*) of the Rocky Mountains.

Game is very plentiful in many parts of the province. The capercailzie, or wood grouse, "Tjäder" (*Tetrao urogallus*), is seen even near the road, and neither our presence nor that of our horses seemed to frighten them. These birds are the largest winged game found in the forests of Scandinavia, and, when properly cooked, are delicious eating. They weigh from ten to fifteen pounds each, and even more; great numbers are trapped in winter in Norrland, and forwarded to the cities. The black grouse, "Orre" (*Tetrao tetrix*), the hazel grouse, "Hjerpe" (*T. bonasia*), the ptarmigan, "Dalripa" (*Lagopus subalpinus*), and the mountain ptarmigan (*L. alpinus*) are also plentiful, as they are in many provinces. The partridge, "Rapphöns" (*Perdix cinerea*), is rare. Plover (*Charadrius apricarius*) and snipe (*Gallinago media* and *Gal. major*) are not uncommon.

As in many other districts, at certain seasons of the year,

several varieties of ducks and geese, and the swan, make their appearance on the lakes and seas.

The game and fishery laws are strictly enforced. The moose can only be hunted from the 10th of August to the last day of September; the beaver, which is nearly extinct, cannot be killed at any time; the capercailzie and other species of grouse, and the hare, cannot be shot from the middle of March to the 10th of August; the partridges and red grouse are shot in September and October. Experience shows that in the countries where the fishery and game laws are the most stringent these are most abundant. Fishing is excellent in most of the lakes and rivers of the province.

From Östersund the high-road to Norway follows the northern shore of the Storsjö, and, crossing its outlet at Flaxelfven, continues westward. There is also a new route, which is far more pleasant and less tiresome.

Steamers run from Östersund twice a week to Qvittsle, five Swedish miles, where can be taken the post-road to Bonäset, four miles farther, on the southern extremity of Kallsjön, 1281 feet above the sea; and a sail of four and a half Swedish miles more brings the traveller to Sundet, and a drive of about half a mile to Anjehem, on the Anjan lake, 1413 feet above the sea; thence a sail of two miles lands him at Melen, within seven miles of the Norwegian frontier.

By the old road from Östersund to the Norwegian frontier the scenery varies from long stretches of forest to fields of barley, rye, and oats. A species of pea or vetch is planted extensively, to be used as fodder for the cattle.

At the station I found an old woman was to be my driver. The horse provided was apparently as old as she, and was the laziest animal I had ever seen. The woman, manifestly in continual fear that he was getting tired, alighted at the foot of every hill, petted the beast, and gave him a piece of black bread from a loaf provided specially for the animal, and treated him to a handful of hay. Every time I got out to relieve the horse she was much pleased; but even then, with apparently no reason, she would stop occasionally to give him time to breathe, and feel his body to see if she could detect any moist-

ure. Once she discovered that he had been overheated, and we had to stop for a quarter of an hour to let him get cool again. The horse knew how tenderly he was treated, and was intelligent enough to know how to act, so that we could hardly put him to a trot; all the shouting and coaxing expended upon him would not make him move a step faster than he pleased. I was much delighted with my venerable driver, and, as the scenery was exceedingly beautiful, the time passed pleasantly. Our road ran between the river-like lake and hills, green with birch, pine, and fir, with mountains in the distance. As we approached Åreskutan the country became wilder, and I counted more than thirty patches of snow on that mountain.

I stopped at one of the farms at the base of Åreskutan, but there was no one in the house, all the inhabitants being busy in the fields; a servant-girl, who had seen us approaching, came to inquire who we were, and went to call Hans Benjamin, the farmer, who soon made his appearance, and welcomed us, and agreed to guide me to the top of the mountain.

This farm had two dwelling-houses. The one for winter, which was inhabited, had in a corner one of the open and spacious fireplaces, consisting of a platform about a foot high, above which hung a crane, the whole open space being four or five feet square; for the summer months, the opening had been filled with branches of juniper; the floor was clean, and, as was customary, juniper twigs had been scattered over it to give a pleasant odor; the other rooms were kept in the same good order; when no juniper, fir, or pine twigs can be obtained, the leaves of the birch and some other trees are used.

From the summit of Åreskutan, 4958 feet high, I had a glorious panorama of mountain ranges, thickly dotted with lakes, in which some of the largest rivers of Scandinavia find their sources, or a great part of their water-shed; the streams run either east and west or north and south; among the largest are the Ångerman, Indals, Ljusne, Stördal, and the Glommen —this last being the largest river in Norway.

I found upon the peak of Åreskutan a stone urn, in which was a tin box containing a blank-book; I added my name to the written list, fired two shots from the double-barrelled gun

I carried for shooting ptarmigan, and, after a descent of an hour and a quarter, arrived at the farm whence I had set out.

In the evening the farmers came in, and we had a good time; I had to *skål*—meaning "to your health"—with them; there was no help for it, for if the guest declines, the people are offended and call him proud; the drinking-cup in olden time was called a skål—hence the name.

Thence to Skalstugan and the frontier of Norway the scenery becomes monotonous, consisting mainly of forests and swamps—telegraph-poles being the only apparent sign of civilization beside the road; the soil is more sterile, and the farm-houses are unpainted.

About three miles before reaching Stalltjernsstugan is one of Sweden's finest water-falls—Tännforsen. The river is about eighty feet wide, and is divided by a rock called the "bear rock," on account of a bear which was drowned in the attempt to swim across; it plunges about ninety feet in a sheet of foam, and forms below a picturesque lake.

At Mestugan the farms appeared less thrifty, though considerable butter is made; at Skalstugan, also, was a fine butter and hay farm, and all the people were busy getting in the crop.

In less than an hour's drive from this last farm the Norwegian frontier is passed, at the highest point on the high-road between the two seas. The plateau was bleak enough; the rocky hills were clothed with reindeer-moss, and between the undulations were swamp-land, birch-trees, willows, and morasses; on one side a rivulet seemed to be on the line of the Swedish water-shed, while on the other flowed a stream going towards Norway. Upon a slab were inscribed the distances from Östersund, sixteen and a half miles, and from Trondhjem eleven and three-quarter miles. The ascent from the Baltic had been gradual, and I did not realize that the road was two thousand feet above the sea-level, so good had been the engineering work.

On the western slope of the range the scenery is among the finest of the kind in Norway. At first the trees were scarce, but as we went on the pines made their appearance — tall,

strong, and healthy, with dark mosses hanging upon their branches. The river below was a foaming torrent, with several water-falls, and the valley became very narrow and extremely wild. There seemed to be hardly a place for the road, which continued to be excellent, and is hewn out of the solid rock; walls had been built to the water's edge, to protect the way from the torrents, and blocks of stone were placed a few feet distant from each other as an additional safeguard.

A farm barred the road, which passed through a gate into the yard: it is Garnes, the buildings of which formed a square. Everything appeared strange, primitive, and old. This farm belonged to a widow. I found two pretty girls, about eighteen years of age, washing the floor of the parlor; one of them had the figure of a Venus; her under-garment was open, revealing her form almost to the waist; but the weather was warm, and she was perfectly unconscious of anything approaching impropriety.

The landlady gave me a good dinner, and did not want any money for it. "No, indeed!" said she; "and you must come again: you shall always be welcome. The Norwegians are kindly treated in America; so you shall be with me."

Farther on the road was barred by another old-fashioned square farm, called Næs. Passing the farms of Garnes and Næs, the vegetation improved as we descended towards the sea; the soil was formed of alluvial terraces. Now the yellow fields of rye contrasted with the dark pines; and soon a sublime view of the valleys of Suul and Verdal burst upon us. In the distance lay the superb Trondhjem fjord, and at my feet the country was covered with farms and farm-houses. Terraces overlapped each other; and a river flowed in the middle of a valley which was several miles broad, and flanked by mountains covered with dark forests. Rounded and oval hills formed little table-lands at different points, and were yellow with the grain crops: ravines, pastures, meadows, woods, mountains, and golden fields were all mixed together. The sides of the lower terraces by the river in many places had slid down, showing the gray color of the clayey banks. From the

place where I stood the scene appeared like fairy-land; there is not in all Norway a more charming landscape.

As we came down and caught views of the farm-houses near us, they appeared poor, and not so picturesque as when seen from a distance. There seemed to be too many of them, property having been too much divided. The roofs of the houses were covered with earth, and the cow-house was attached to, and often formed a part of, the dwelling-house.

Beautiful fair-haired Norwegian children were running about barefooted and bareheaded. Many of them had been in the woods, and had come home laden with young branches of birch, which were to be used as fodder for the goats and sheep in winter. There were a great many pigeons on these farms, and chickens were becoming abundant.

We finally reached the Norwegian town of Levanger, which was exceedingly clean, although the streets were not paved; the red-colored tiled roofs gave a cheerful appearance to the place; a few years before it had been almost entirely destroyed by fire: it also has a hospital, for the Norwegians take good care of their sick poor. The port is well sheltered, affording very safe anchorage. Two fairs take place here every year, and great numbers of Swedes from Jemtland and other parts of the country attend them.

Not far from Levanger is the hamlet of Stiklestad, celebrated as the place where St. Olaf was slain in a great battle. Upon the spot where the Christian warrior fell were the remains of an old stone pillar, with an iron cross on the top, while a modern one has been erected by its side.

The church is very ancient, built of stone, and is said to have sunk six feet below its former level. On the walls I counted twenty primitive paintings, which date from before the Reformation: they illustrate the stories of the Bible, representing Adam and Eve, both nude; Adam under the apple-tree, tempted by Eve, rather ludicrous; Matthew, Mark, Luke, and John and the different phases of the life of Christ, ending with his crucifixion.

From Levanger southward to the city of Trondhjem, about fifty miles farther down the fjord, the scenery, both by land

and water, is very beautiful. The superb road winds its way by thrifty farms and hamlets, among wooded hills here and there skirting the fjord. This part of the Trondhjem Stift is one of the most fruitful in Norway, and when, on the 9th of September, I left Levanger, the hay crop was being successfully gathered. The grain-fields were about as advanced as in the provinces of Sweden we had left. We were travelling between 63° and 64° lat., and the currants and strawberries had entirely gone.

The springs along the Norwegian coast and fjords are earlier than in Sweden, but vegetation is more backward, as the climate is not so dry, and with less sunshine; but it is also less subject to sudden frosts, which rarely occur in August, and none had appeared at the date of our arrival.

Near Levanger, by the high-road, was one of those large *herregaard* ("gentleman's farm") which one meets here and there in Norwegian Nordland, easily distinguished, by their clean appearance, flower and vegetable gardens, and planted trees, from the *gaard** of the bonde (*bonde*, farmer owning his land). This was remarkable for the size of its buildings. The dwelling-house was over one hundred and forty feet long, with an upper story, and broad in proportion; in front was a garden; at the back the yard was flanked by three other large buildings, which, with the dwelling, made an enclosure about two hundred feet wide and two hundred and fifty feet long; in the centre of the square the water came through pipes from the mountains. One building had stalls for more than fifty cows, and there was a stable for nine horses; above the cow-house was a barn, where a hundred tons of hay could be stored.

The people were busy harvesting; the women were binding sheaves, and seemed to suffer from the heat of the sun; many wore only a long linen chemise with sleeves, with a handkerchief as a belt around the waist; and in their simple innocence they did not seem alarmed when, bending over, they showed their snowy bosoms.

I did not wonder at the excellence of the Norwegian roads

* *Gaard, gård*, farm.

when I saw the manner in which they were built. First there was a foundation of heavy rounded boulders; over this were placed layers of pieces of cut granite or gneiss to a depth of fifteen or eighteen inches, and then the whole was covered thickly with fine gravel; I then understood why rain and frost did not affect them. The road at times was very hilly, and the ascents or descents consequently steep; the ponies at the station were in better condition than on many roads, as there were few travellers. In this region, as soon as the descent began, the reins were let loose, and immediately the horses plunged down the hills. The pace was fearful, but the animals are so surefooted that there is no danger.

The farms vary very much, according to the districts. From Forbord the valley was thickly settled, but the farms were small. Many of the dwellings on the poorer ones had only grass-covered roofs, while others were roofed with shingles, with one side of the house apportioned to the cows, goats, and sheep; others, again, had little low-built houses for the cattle.

The stations on this route were poor in regard to food; but eggs and bacon, with excellent coffee, milk, butter and cheese, with flatbröd, were readily procured.

The picturesque hamlet of Humlevigen (*vig* meaning cove in Norwegian), with its little cotton-mill, lay by the river. Its houses were covered with slates or red tiles, shingles, and earth. Near the shore stood a few fishing warehouses, built on wooden piles, and three smacks were stranded on the beach. The days were shortening fast, and at about eight o'clock the outlines of the mountains appeared dimly in the twilight; a little later the aurora borealis shot up its high flashes to the zenith.

As I approached Trondhjem the island of Munkholm arose from the fjord, upon which fortifications were in progress for the defence of the city. On the island a monastery of Benedictines was founded in 1028, a few ruins of which, within the walls of the fortress, are all that remain.

I learned to my cost the effect of cobble-stone pavements on the occupant of a cariole without springs, as we drove through the streets of Trondhjem. It seemed as if the bones of my body were all shaken to pieces; and I was glad when,

pounded almost to a jelly, I alighted at the hotel. The service was very neat, and everything seemed very luxurious compared with the fare at the stations.

Trondhjem is in 63° 26′ lat., and was formerly the capital of Norway. It is said to have been founded by Olaf Tryggvason in 997. It has a population of about 21,000, and is in direct railway communication with Christiania, and ranks the third city in population in Norway. It is built on the shores of a bay at the mouth of the river Nid; and here the King of Norway and Sweden is crowned as King of Norway. It had a cheerless look—numerous fires having destroyed the wooden houses in parts of the city at different times. The air of stillness about the place seemed to show that it had seen better days, and grass was growing in many of the streets. It is hoped that by its new railway communications it will recover some of its former grandeur and prosperity. It is the residence of a Stift Amtmand, and of a bishop, the seat of a high court of justice, and contains a large hospital. There are several daily morning, and one afternoon, newspaper. The schools are numerous, and here, as everywhere else, my visit to them was a source of great pleasure.

In summer the town is filled with tourists—principally English—most of whom like to travel from Christiania to this point by way of Gudbrandsdal. As they are in the habit of putting on airs of superiority, the inhabitants do not seem to care for foreigners, and have the reputation of being generally cold and more reserved than those of other cities. The great number of travellers has demoralized the lower classes, who have learned to be exorbitant in the charges for driving, ferrying, carrying luggage, or performing other services. Two Englishmen and myself, who had to cross the river Nid—not wider than a broad street—were charged two marks. I refused to pay the amount, but the Englishmen yielded, thus encouraging the ferryman in his extortionate demands upon foreigners. There is a regular tariff of only a few cents, and the fellow would have been heavily fined had I made a complaint.

The cathedral is very fine, and one of the oldest stone buildings in Norway. It is being restored, and will consequently

lose the quaint old look so much esteemed by the lovers of antiquity.

The entrance to the fjord from the south is amidst an archipelago of islands, and near its mouth is Hiteren, the largest island of Norway south of the arctic circle; beyond this you enter the Trondhjem fjord proper, with Skjören fjord to the north-east. It then bends to the south-east, throwing out a branch southward, and then eastward to Trondhjem. From the city it runs north-easterly into Stördalshalsen, Levanger, and Værdalsören, and connects farther north by a narrow strait with Beitstad fjord to Stenkjær; from this place one can drive as far as Namsos and up the Namdal, where the roads terminate. The length of the fjord, including Beitstad fjord, is over seventy-two miles.

One should not fail to visit the Lierfossen, about three miles distant. The river forming the upper fall plunges from a perpendicular height of 100 feet, and the lower one, a short distance farther down, from a height of 80 feet. The water is as clear as crystal, but the upper fall is by far the most picturesque. Saw-mills and smelting copper furnaces, however, detract much from the beauty of the landscape.

CHAPTER XV.

End of the Tourist Season.—Stormy Weather.—Travelling with a Young Lady.—"Take care of your Straps."—A Lazy and Knowing Horse.—A Mountain Farm.—The Dovre Mountains.—Destruction of Crops.—Frost.—Sorrow among the Farmers.—A Snow-storm.—Sleighing in September.—The Romsdal.—Fine Scenery.—Numerous Water-falls.—A Comfortable Country Inn.—The Molde Fjord.—The Town of Molde.—Dinner with the Governor.—Convenient Roads.

On a September day I was travelling once more on the magnificent highway which connects the city of Trondhjem with Christiania; I had finished my summer rambling in out-of-the-way places, unknown to the throng of tourists. The weather was very rainy, and the few pleasure-seekers or lovers of wild scenery were fast going back to Christiania. The herds were coming from the sæters,* for in the higher regions where these are found snow had already fallen; the wind swept through the valleys with great force, and the appearance of the mountains and hills had entirely changed in a single day. The hills were covered with snow, though there was a pouring rain mixed with sleet in the valley.

While quietly looking out of the window at one of the post-stations, waiting for less stormy weather, a cariole stopped before the door, and a young Norwegian lady alighted, and at once asked for a horse. She lived on the banks of the Mjösen, and was the daughter of one of the prosperous farmers of that region; she had come from Trondhjem, and was on her way home, for some one of her family was very ill. Love led her to brave the storm, while I, lazy and listless, had been afraid to face the cold rain and sleet. I felt ashamed, and asked myself what had become of the blood that once had made me encounter dangers in distant countries; had I become so effeminate that I was afraid of bad weather?

* Summer farms, see p. 280.

I said to the young lady, "I too am going, Fröken; if you can travel in such weather, I can." "I am very glad," she replied, in an innocent, good-hearted way; "it will be much more pleasant for me, for I am all alone." I ordered a horse; she had ordered hers before, and after she had taken a cup of coffee to warm herself, we were ready for the journey. I lent her my wrapper, for she had been thoroughly wet, and led the way in my cariole. I before this had had my experience of dishonesty in Norway. At the station of Aune I missed my luggage; it had been put into the station-house most carefully, but without the strap; and here the same thing would have happened if I had not been on the alert—the strap had been left in the cariole by my attendant, as if it had been forgotten. This is a common occurrence while travelling in several of the districts lying between Trondhjem and Christiania; the straps are not stolen for purposes of sale or profit, but for the private use of the pilferers; and those who commit these depredations would not take anything else. I hardly met a traveller who had not suffered in this way, and my young lady companion was complaining of the same.

The scenery, after I had left the city of Trondhjem, was very beautiful. At times the road was cut out of the solid rock, along the brink of precipices, with the river Driva seven hundred feet below. On approaching the Dovre fjeld the new road was built with such skill that the ascent seemed very gradual. Norway has produced some of the finest road-engineers in the world, whose skill has triumphed over difficulties apparently insurmountable, and there is no country, except Switzerland, where their ingenuity is more heavily taxed.

Though it was only the 17th of September, the wind was piercing cold, and the summits of the mountains of Dovre were covered with snow; the mercury stood at 24°. The rains of the last few days had swollen the torrent of the turbulent Driva, which, for a space of perhaps fifty yards, rushed with great force through a tortuous channel, and between rocky walls not more than fifteen feet apart. At the station of Drivstuen, at the foot of the Dovre fjeld, about 2200 feet above the sea, the scenery is very striking.

A little farther on is the lonely mountain station of Kongsvold, in a gorge in the Drivsdal, at a height of 3063 feet above the sea. The wind was blowing furiously, but my companion seemed to be indifferent, for she was anxious to reach her home. The horse I obtained at this station seemed to know that I had no whip, and all my endeavors to increase his speed beyond three miles an hour were of no avail, until I ordered my post-boy to cut a switch of the wild willow, the sight of which acted upon the animal like magic. When we reached the highest point on the road, 4594 feet above the sea, the thermometer marked 22°. After this we descended to a group of dark-looking houses at Hjerdkin, the highest mountain station on the Dovre fjeld, founded in the early part of the eleventh century, called Fjeldstuen. The people had preserved their honesty, notwithstanding the temptations of one of the most crowded stations between Trondhjem and Christiania. Both in summer and winter travellers stop there, and during the summer months the place is always full of strangers, especially Englishmen. There is a fascination in the place and its wild surroundings. The tourist may ramble over the plateau of the Dovre fjeld fanned by invigorating breezes; the botanist will find in abundance exquisite wild-flowers. The rides over the hills with one of the surefooted and gentle Norwegian ponies are very enjoyable; the pedestrian fond of Alpine climbing may ascend Snehætten, the highest mountain of the range, to a height of 7714 feet, and explore its glaciers; and although the reindeer are now scarce, a few small herds may be discovered by the keen sportsman. The fare is good, and the cream, milk, and butter delicious. Prices are a little higher than in many other places; but the distance from the sea is great. In Norway the traveller is not considered simply as fair game, and exorbitant prices are not asked for the comforts given.

The snow, which lay thickly on the ground at Hjerdkin, had gradually disappeared before reaching Fokstuen, 3150 feet above the sea.

At Dombaas, where there is a telegraph station, the scene had entirely changed, and fields of waving barley and potatoes

greeted the eye. Groups of small farm-houses were scattered here and there; but the district was a poor one, and many of the girls were glad to engage themselves at the rate of four or five dollars a year, including clothing, to their richer neighbors.

Here, at a height of 2000 feet above the sea, the crops were not quite ripe, the season being backward. Barley required a few more days of sunshine, and the potatoes were still in bloom. The evenings became cold, and the farmers' faces showed their anxiety. The wind was from the N.N.W., and for two consecutive nights black frost appeared. The potato-vines turned black, and the grain crop was seriously injured. After the first frost everybody was at work in the fields, women and men sheaving the barley, and every available hand digging the potatoes. There was sorrow in many a farmer's heart, for the people were now greatly distressed, and I detected tears on many a mother's cheek during these two days. After this sudden cold spell the weather became cloudy, a violent storm set in, and the ground was covered with eighteen inches of wet snow, though it was only the 20th of September. This compelled me to abandon the cariole.

The tourist, on his way from Trondhjem to Christiania, loses much fine scenery by not following the Romsdal to the sea, the main road branching off at Dombaas. The drive from there to the Molde fjord, a distance of seventy miles, is one of the grandest in Norway, presenting a rapidly changing panorama of superb scenery.

The valleys of Gudbrandsdal and Romsdal are separated by the Lesje lake, about seven miles long, and 2050 feet above the sea. It is one of the few lakes which have two outlets—one river flowing out at each side in opposite directions. The Logen runs south, through the Gudbrandsdalen, ending in Lake Mjösen, while the Rauma flows north through the Romsdalen.

Between Stueflaaten and Horgheim the finest and the grandest scenery of the road is to be seen, and this is the culminating point of the whole journey. The gorge or valley presents a spectacle of grandeur not easily forgotten—the high perpendicular walls, the bare and rugged mountains, with dark and deep crevasses, and the black striped abrupt sides of the hills

MONGE-FOSS IN ROMSDALEN.

and gneissic rocks, gave a peculiarly sombre aspect to the scene. At Ormeim, near the post-station, the Rauma receives the waters of a stream—forming a magnificent cascade—the Vermedalsfossen, which divides itself into three branches, each one tumbling down the sides of the hills in foaming billows. Where the valley was flat, the meadows, still green, contrasted with the dark perpendicular walls on each side, while the summits of the mountains were covered with snow.

The nights were cold, but in the morning the thermometer stood only a few degrees below freezing, and ice was seen on the sides of the brooks. During the day the mercury in the shade rarely rose above 46°, but reached 85° in the sun, which rapidly melted the snow. Since the storm the sky had been cloudless, the weather delightful and bracing.

In one part of the valley, between Stueflaaten and Fladmark, the view was simply sublime; from the abrupt mural wall numberless water-falls, created by the melting of the snow above, made the scenery wonderful. Many of these plunged from such great heights that they were lost to sight—appearing in the far distance like small silvery threads, which disappeared and reappeared, while the eye vainly tried to catch and follow them, and many seemed to have melted in a cloud of spray before reaching the ground. The cascade scenery was beyond description. In a distance of less than one English mile, before reaching Fladmark, I counted on both sides of the valley seventy-three water-falls, none of which were less than 1000 feet high, while some plunged down 2000 feet. All along the mountain sides were distinctly seen the marks of the glaciers in grooving, polishing, and scratching the rocks. Terraces were also distinct, even to the height of 500 feet, showing the ancient sea level.

A few miles before reaching the Molde fjord one comes to a charming inn, called Aak, where I tarried a few days. It was a small, white, nicely-painted house, and a very cosy and comfortable place, crowded in summer with tourists, but now deserted, for both the travelling and harvesting seasons were over. A few vegetables were seen in the kitchen-garden, where raspberry, currant, gooseberry, and blackberry bushes

were abundant. The apple and plum trees were loaded; but the season had been cold, and the apples were not yet ripe. We were between 62° and 63°.

How luxurious seemed the fare of that little inn after my summer explorations in the mountains! The cooking was excellent; I had three meals a day—the bill of fare including soup, delicious fish, mutton, fowl, green pease and other vegetables from the garden, and made dishes; I also had all the cream, milk, and butter I wanted; the coffee was excellent, and the table-linen white. The rooms were small, but the reputation of this place is such that in summer it is crowded, the guests lodging at different farms. People spend weeks at the Aak to enjoy the fine scenery. It is one of the best country inns of Norway, and the prices are very moderate; and I hope that the good people who own the place, and keep it so well, will always retain their honest Norwegian ways.

Though everything was in repose in the valley, a gale was blowing on the summits of the mountains, where clouds of snow were flying in every direction, and to a great height, in the form of spiral columns. Now and then the quiet was disturbed by a booming sound, echoed from mountain to mountain, caused by avalanches of snow carrying rocks and boulders into the crevasses below, while the grand Troldtinden and the Romdalshorn seemed to preside over the picturesque landscape of the valley. Opposite Aak was one of those short narrow valleys which end abruptly in a gorge, with two or three sæters.

From Aak, after a pleasant drive of about three miles, one arrives at Veblungnæs, at the head of the fjord, where a little steamer takes passengers to Molde. After a sail of a few hours through the fjord the little town comes in sight, nestled at the foot of the hills by the sea. Its yellow and white painted houses, roofed with red or dark painted tiles, present a very picturesque appearance from the sea, and the clean streets and tidy appearance of the buildings are a very agreeable sight after landing.

I do not know of any town in Norway which presents a more extensive and beautiful panorama of fjord and mountain

PEAKS OF THE TROLLTINDEN.

scenery. The church is the principal building; the graveyard around it was redolent with the perfume of autumn flowers. Chestnuts, oaks, mountain-ash, pyramidal poplars, and birch-trees shaded many of the graves; most of the tombs bore no name, but each family knew the resting-place of their dead. In the town there is a very fine avenue of birches, some of which were five feet in diameter. On Sunday the church was crowded. Before ascending the pulpit the clergyman divested himself of his white surplice and appeared in a black cassock, with ruffles around his neck. He was very eloquent, and there was a dead silence in the congregation, interrupted only by the ladies. The sermon lasted for one hour and twenty minutes, and the clergyman appeared quite tired at the end. As usual in all congregations, some fell asleep, but in my pew a sleeper was aroused by a pinch of snuff, which had the desired effect; he sneezed and kept awake during the remainder of the service. After the sermon came the baptism of two children; this ceremony lasted twenty minutes—the rite being administered by the sprinkling of water on the forehead of each child three times, to represent the Trinity; the parents and godfather and mother passed behind the altar to deposit their thank-offering for the officiating clergyman.

In a Norwegian town the stranger should not look for the finest building as the residence of the Amtmand (governor), or any high officer in the employ of the government; it is a characteristic trait in Norway that a modest building, as a rule, is the residence of the official personage of the place. In Sweden, however, the residence of the governor of a province is always fine, and even imposing, compared with most of the other buildings of the town.

The Amtmand kindly invited me to spend an evening at his house, where a select party of gentlemen had been invited to meet me, among whom were some of the officials of the place. All the guests conversed in English, with the exception of the older people, who spoke French. English and German are now extensively spoken—the result of the increase of the trade with these two countries. The plain cosy parlor in

which I was received was a picture of neatness, and cheerful with flowering plants.

Shortly after my arrival tea was passed round, after which all the guests helped themselves to a glass of toddy. Then came supper. The host took my arm and led me to the dining-room, where his good unpretending wife presided. The custom of bowing the head, while asking a silent blessing and giving a "welcome to the board," was observed by the governor, with a glass of wine; and soon after he kindly proposed a toast in my honor, saying they were all glad that I had come to visit Norway and Molde, and hoped that I would see the country thoroughly, and live long, that I might work for the good of mankind and in the interest of science. This complimentary little speech being ended, each guest bowed to me. As the supper drew to its close, I proposed, as usual—this being the pleasant duty of the honored guest—the health of the governor's wife, after which all bowed their heads silently, in sign of thanks to the Almighty; then all rose, clapped their hands, bowed to each other, and thanked the host and hostess.

In a corner of the unostentatious parlor was a large collection of immense meerschaum pipes. A pouch of tobacco was brought in, and every one except myself began to smoke; they seemed amazed when they saw I did not indulge in a pipe. On the table were several decanters of wine and brandy and a kettle of hot water, and each one made for himself a glass of toddy, chatting sociably till nearly midnight.

The next day the governor visited the schools with me, remarking, "Though ours is a poor country, we love to spend money for education." He took great delight in having everything shown to me by the principals or teachers. I was pleased to observe the manly feeling displayed. He did not come with that haughty and contemptible demeanor so often assumed by officials on the Continent, and he was received with politeness, but not with obsequiousness.

In this modest town Hebrew, Greek, Latin, French, German, and English were taught. Some of the boys read English to me, translating it afterwards into French. The boys and girls are taught in the same room.

ROMDALSHORN.

I had arrived in Molde with a few dollars only, and the question naturally arose in my mind, What was to be done to raise funds? The only course left to me was to telegraph to Christiania; but I had not visited the place, knew none of the bankers, and had no way of establishing my identity; so I sent this message to Messrs. Heftye: "I am without money, but I have a letter of credit upon you. Can you telegraph to some one here to give me some?" I was relieved when a prompt reply came from the firm in these words: "Mr. ——, a gentleman in Molde, will let you have the amount you require." Soon after the arrival of this message the gentleman in question made his appearance, and said he had received a telegram from Messrs. Heftye, and had come to ask for a day or two in order to collect the money I wanted, and then courteously inquired how much I needed. He had received an order to give me all I required, but explained that Molde was a small place, and that it had no bank, and, therefore, that he might be obliged to go to several persons to collect the amount, if it was a large one. "I want only a small sum," said I, "to take me to Christiania." "In that case," he replied, appearing greatly relieved, "you may have several hundred dollars at once." Only one who has been in the same predicament can appreciate the relief I felt on the receipt of the cash.

From Molde the tourist or the pedestrian who is a lover of nature will see such a vast and fine field of exploration opening before him, that he will hardly know at what point to begin his wanderings. Towards the north there is a wild coast, with magnificent outlines, where the midnight sun is visible, and where the sail among thousands of islands offers a constantly changing panorama. Towards the south there are fjords of unequalled beauty, as the crowning glory of Norwegian landscape. There is also a high-road to Bergen, passing through grand scenery, rivalling in some respects that of Romsdalen. Fjords must be crossed on this route, and the alternate views of sea and mountains are very striking. There is likewise a high-road through the Romsdalen, which I have already described, leading either to Christiania, Trondhjem, or Röraas, and thence into Sweden. Another road, which, after

leaving Molde, skirts the Fanne fjord, crosses two branches of the Christiansund fjord. There are also numerous foot or bridle-paths, diverging from the highways or from the fjords, and winding up the mountains towards the glaciers, affording to the botanist, the sportsman, the angler, and the admirer of the wildest scenery, a succession of ever-changing views.

THE MOLDE FJORD.

CHAPTER XVI.

BERGEN.

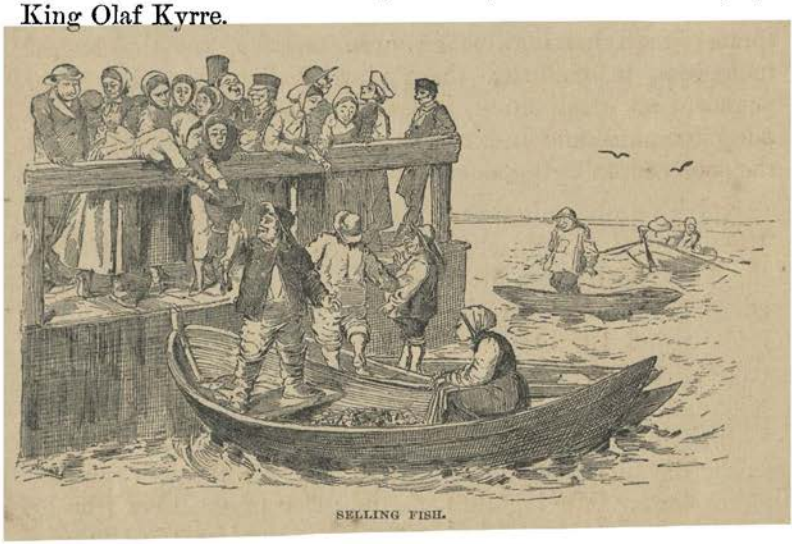
The Port of Bergen.—Foundation of the City.—A Rainy Place.—The Fish-market.—A Vision of Feminine Beauty.—An Interesting Industrial School.—The Cathedral.—Confirmation.—Change Days for Servants.—Lively Appearance of Strandgaden.—Bergen Hospitality.

EARLY one morning, as September was drawing to its close, I approached the old city of Bergen. It was a beautiful autumn day, with not a breath of air stirring, and a thick smoky atmosphere hung over the shores. Passing the jetty and its bright-painted light-house, the port seemed like a large canal crowded with vessels. We steamed slowly through the shipping and the forest of masts: the quaint-looking warehouses, with their sharp-pointed and red-tiled roofs, were dimly seen in the distance, looking still more fantastic through the hazy atmosphere. Moving through the maze of small craft loaded with firewood, logs, fish, hay, etc., and amidst the din of a busy port, we cast anchor, and were soon surrounded by small boats, whose occupants were eager to carry the passengers on shore for a few skillings.

Bergen, as seen from the sea, is very picturesquely situated. On the left there is a high range of bleak, gray hills, upon the declivity of which a part of the city is built in the form of an amphitheatre; the port is narrow, forming a sort of canal, and on each side are the warehouses: many of those on the left, built by the Hanseatic League, are striking types of the architecture of that period. A high ridge, crowned by the castle of Bergenhuus, separates a part of the town from another narrow bay. The port in the spring of the year is very animated, when several hundreds of small craft return from the fisheries. Great quantities of dry cod, cod-liver oil, and sev-

eral hundred thousand barrels of pickled herring, are exported yearly. The town seems to be nestled in a hollow. A small lake, a few hundred feet above the sea, and some miles distant, furnishes the city with water.

Bergen, lat. 60° 24′, is in size the second town in Norway —Christiania being the first—and has a population of nearly 38,000 souls; it was founded, in the year 1069 or 1070, by King Olaf Kyrre.



SELLING FISH.

The town, with its neighborhood, is said to be the most rainy spot on the coast of Norway—which is saying a great deal, but it is well deserved. The amount of rain falling is great—the average number of rainy days in the year being 134, and of snowy days twenty-six, and the fall of rain and snow melted amounts to about seventy-two inches annually. The climate is very mild; the mean temperature during January is a little above the freezing-point; in February, a fraction of a degree below; in March, 34° above; in April, about 45°; in May, 48°; in June, 55°; in July, 58°; in August, 57½°; in September, 53°; in October, 45°; in November, 37½°; in December, 36°. In July the mercury rises to 85°. The number of foggy days is about forty. The mean temperature of the year is 43°, one of the highest on the peninsula of Scandinavia.

The city is a very lively and thrifty place, and, although some of its streets are narrow and crowded, it is full of interest to the visitor.

Fish market-day is one of the sights not to be missed. In the morning about one hundred and fifty fishing-boats were packed closely together along the quay. Many were selling their cargoes from their boats, others had kept the fish alive either in tanks or in buckets. There were boats filled with sprats (small herring), called here *brisling*, but the largest trade was in codfish; there were halibuts weighing 150 pounds, and often more, and this fish was cut in slices for sale; flounders and haddock were plentiful, and very cheap—the poor people living chiefly on fish.

LOOKING AT THE FISH.

The fishermen in their boats, with either wife or daughter, were offering their fish for sale, looking with eager eyes for customers, who come to buy the cheapest they can, especially if the fish are plentiful. It was most amusing to see the women bending over the railing, looking into the boats at the fish; such as wore short dresses—and there were many—showed their limbs in a way that delighted those who passed by, and

who were lovers of fine muscular development, and of well-shaped, pretty ankles. Servant-maids and country people jostled each other. Many returned home loaded with fish—mother and son carrying a big load between them, or a strong man bending under one larger than himself. The crowd was a very jolly one, and the peasant men and women, in queer costumes, were walking merrily among the Bergen folk.

One of the pleasantest sights which strikes the stranger in Scandinavia is to see the number of children going to school, and Bergen is no exception. The whole juvenile population turns out every morning. On rainy days the girls wear water-proof cloaks. The younger scholars have a little knapsack on the shoulder for their books, thus throwing the chest forward, and making them walk more erect. The oldest school-building, founded in 1738, is of stone. Instruction there is free, and the boys, although belonging to the poorer class, are tidy and well-behaved. In another part of the town is a large and more modern school, for the free instruction of boys, having a gymnasium, in which they are required to practise athletic and military exercises as a part of the course of study. The upper part of the building is used for boys' and girls' classes. The school hours are from nine to twelve, and from three to five. In several classes both sexes are taught together, and each scholar has a separate desk. I remarked with pleasure that there were several lady teachers. In one of the rooms, where boys only were taught, one, with a beautiful voice, led the singing at the request of the superintendent. They sung, for about twenty minutes, Norwegian, Swedish, and Danish ballads.

One of the most valuable institutions is the free industrial school, where poor girls are taught the arts of female industry. It is an establishment of which Bergen may well be proud, and which every city ought to possess. The building is old-fashioned, and in the crowded part of the town. I entered a large room where the principal, an elderly lady of benignant countenance, received me with great courtesy. Upon a large table lay bouquets of flowers, which gave a cheerful appearance to the place, and were intended to impart to the scholars a taste

for the beautiful. Scattered among the flowers were pieces of fine work, which the girls had made for different persons, and for which they were to receive pay. The ages of the

FISHERMAN CARRYING A FISH.

scholars ranged from seven to sixteen years. All were working together in groups or classes, according to their proficiency—making dresses and shirts, hemming, stitching, knitting, mending, and darning—under the care of faithful and competent teachers. It was a most interesting sight, for these poor girls were learning how to be useful. There was some wonderful skill in the darning of table-cloths, the work being so neatly done that one could hardly distinguish the place which had been mended. The young children had simpler work in a room of their own, where were sewing-classes under instruction daily. This school had over five hundred pupils, the hours

being from nine to twelve, and from two to five. Three hours were given to study, and three to lessons in the use of the needle, etc. The girls would here receive a fair rudimentary education, and at the same time were learning how to take care of themselves and of their families. Great and deserved credit is given by the good people of Bergen to the superintendent and the teachers for the fine management of this practical school.

Before leaving the building the principal presented me with two pair of thick knitted woollen stockings, made by some of the girls, as a souvenir. I wanted to pay for them, but payment was refused, and I could only offer my thanks for the courtesy. Perhaps the good lady may learn that in the following year these stockings helped to keep my feet warm in my Lapland shoes, when I was crossing the country in the depth of winter, over the mountainous tracts between the Gulf of Bothnia and North Cape.

In the cathedral school, where boys are prepared for the University of Christiania, the institution is partly under the supervision of the rector, who at that time was a member of the Storthing, and had a library containing valuable books.

The Domkirke (cathedral) is a queer old building, the arrangements of the interior being unlike those of any church I had seen. On the right, looking towards the altar, it is divided into boxes containing seats, reminding one of a theatre. After service the principal aisle was filled with girls and boys, who were to undergo examination for the rite of confirmation. The ceremony began by an address from the pastor, after which, in the presence of the parents and relatives, question after question was asked of each one by the Domprovst (dean) from the Bible and the catechism. Hours were passed in this manner, until the children became weary, and their looks became vacant. The unnecessarily long ceremony concluded by the dean pronouncing a blessing on each one separately, and saying, "The Lord bless thee and keep thee. The Lord make his face to shine upon thee, and be gracious unto thee. The Lord lift up his countenance upon thee, and give thee peace." On the following Sunday, after confirmation, the children were to partake of the communion.

BERGEN.

On Sunday afternoon, immediately after service, the military band plays in the square for about half an hour, during which time the *élite* of Bergen promenade, and listen to the strains of music. Among the throng are ladies dressed in the latest Parisian fashion, fishermen in their Sunday costumes, and *bönder* from the province of Bergen in their peasant garb. One often notices in the crowd persons with dark hair, whose appearance contrasts strongly with that of the majority of the people.

One of the customs of the country is to engage servants for six months at a time, and then renew their engagements, if agreeable to both parties. This takes place on the 14th of April and October. These two days are called Flyttedager, moving (change days). I was surprised to see great animation in the town. In the evening the Strandgaden presented a most lively appearance—for it is the custom on Flyttedag for all the girls engaged in domestic service to leave their old places at two o'clock in the afternoon, and go to their new homes at nine or ten in the evening. They all put on their best attire and walk in the Strandgaden, where their beaux and friends come to meet them. The Strandgaden corresponds to Broadway, the Boulevards, or Regent Street, and is densely crowded from seven to ten or eleven o'clock, after which it is deserted. In Sweden the dates for renewal are the 24th of April and October, and the servants have the three following days for themselves, which often causes great embarrassment to the ladies, who have then to do the best they can.

The geographical position of Bergen, between the Sogne, the Hardanger, and other fjords and fishing districts, gives to it great commercial importance. From it, twice a week, steamers sail for the most distant parts of these great arms of the sea.

The city is well provided with charitable and benevolent institutions, hospitals, and a home for the aged and infirm. The people are sociable, kind, and hospitable. I have a very agreeable recollection of my repeated visits to this town. Its scientific men were always ready to give me information. I received from the museum a present, which I value highly—a

drinking-hôrn of very ancient date. A visit to that institution is interesting. Antiquities found in tumuli, and the old arms, coins, drinking-horns, carved furniture, etc., etc., are well worth seeing.

There is no town in Norway which tourists can enjoy more than that of Bergen for a couple of days; the drives and walks are beautiful; the novelty of the scene, the different costumes of the peasants, the surrounding country, all contribute to make the time pass pleasantly; but for a longer stay Christiania is preferable.

CHAPTER XVII.

SKETCH OF THE GEOLOGY OF SCANDINAVIA.

Scandinavian Geology.—Former Finland Gulf and Arctic Climate.—Primary Rocks.—Azoic Ores.—Silurian formation, and Characteristic fossils.—Former greater extent.—Rarity of Devonian and absence of Carboniferous strata.—Eruptive Rocks.—No Mesozoic in Sweden except the Lias and Chalk.—Absence of the Tertiary formations.—Extent and Changes of the Past.—Post-tertiary, small.—Glacial Epoch and its phenomena.—Sand, Marl, and Clay deposits.

GEOLOGY, the science which has disclosed to us, page by page, the history of past creations, and which is constantly revealing new facts, has demonstrated beyond controversy the immense lapse of time that has been required to work out the physical changes on the earth, and to permit the development and extinction of the great number of vegetable and animal forms which are found in large quantities over wide areas of its surface.

The peninsula of Scandinavia presents very interesting geological and physical features. A great part of the country was uplifted above the ocean at a very remote period, and there is no other region which exhibits at the surface, comparatively, more extensive areas of the primary rocks constituting a large portion of the oldest crust of the globe.

According to Professor Erdmann, a most distinguished Swedish geologist, a gulf formerly passed from the Arctic Ocean, at Archangel, across Finland—which was then at the bottom of the sea—down to Gotland, or even farther. This he determines from the presence of fossil shells (such as *Yoldia pygmæa*) in the boulder clay of the coast of the Baltic, and central parts of Sweden, now found only in the latitude of Spitzbergen. The shell banks on the coast also indicate a former more severe climate—the highest ones bearing remains of arc-

tic species; the middle ones, of more temperate life; and the lowest, of species now existing on the coast. Professor Lovén also found arctic marine crustaceans living at the bottom of the deep lakes Wener and Wetter, proving that these were once connected with the gulf above alluded to.

The fundamental rocks are gneiss, mica-schist, hornblende, chloritic slates, and quartz; gneiss is the most prevalent, occurring as gray or red gneiss, hornblende gneiss, etc. Among the eruptives granite is the most common in Sweden, occurring with syenite everywhere. Pegmatite, or graphic granite, generally occurs in veins. Mica slate and clay slate occupy much less extent than the granite and gneiss; the former is found in the central parts, especially in Jemtland, near the Storsjö Lake, and farther south; the clay slates are, however, more rare. In some districts of Norway, between the coast and the mountains, the azoic mica-schists include veins of eruptive masses, especially granite and serpentine, and sometimes greenstone; even the more recent rocks are thus penetrated; occasionally the old granite mountains are diversified by slates.

The Kjölen range comprises a chain following the boundary-line from the Skjæker mountains in the north to Faxefjeld in the south; in the north its rocks are imperfectly known, but the central part has sparamite in the middle, Trondhjem slates on both sides, and granite and gabbro masses both in the central axis and in side lines; in the south the range disappears in table-land, which, with Faxefjeld, runs into Sweden.

In the extreme northern part of Norway the primary rocks are less prevalent, being mostly covered with more recent rocks, consisting of slates, sand, and limestones of different kinds. In Finmarken, of eruptives are found gabbro, greenstone, and granite, though not so extensively as in other parts of Norway. Central Norway is chiefly of sparamite formation, with overlying clay slates and quartz in broad belts.

The Dovre range forms one part of the coast, with several spurs extending from Romsdal fjord, as immense granite parallel walls running towards the sea; its middle portion is penetrated by sparamite, with Trondhjem slates and mica-schist on both sides, and gabbro and granite at the base.

Hornstone (flint) occurs in several provinces—sometimes, evidently, transformed schists, at other times amorphous; the same is true of porphyry; diorite and hyperite generally occur in stocks, or in veins in the gneiss; diabase is common, and forms the summits of some of the mountains.

In Norway there is much hornblende and quartz slate, gray gneiss and green slate—either one forming the principal rock or the gneiss, overlaid by the slates. In many of the great granite ranges are rich quarries of felspar.

All the ores of Sweden occur in the oldest azoic formations —copper, nickel, iron, silver, cobalt, phosphate of lime, and gold in small quantity; in some districts the iron is titaniferous, and occasionally entirely above the surface.

The Silurian strata are most developed in central Sweden. The order of succession of the strata is gneiss, or other fundamental rocks, sandstone, aluminous shale, with swinestone, red or gray limestone, and clay slate; the uppermost stratum is eruptive trap; in some districts the limestone and clay slates are wanting, and the trap rests upon the alum shale, the strata being then horizontal.

The lower Silurian strata generally do not vary much from horizontal; but in some places—for example, on the side of Lake Wetter—they have a very sharp inclination, on account of the upheaval of the underlying rock; they consist of conglomerates, sandstones, and grayish slates.

The characteristic fossils are, among the brachiopods, *Strophomena depressa;* among the cephalopods, *Orthoceras;* among the articulates, the trilobites, which are the most common of the fossils.

The older formations often form table-lands, with a gentle slope; they are in places 2000 feet thick, but towards the south grow thinner, and are finally completely covered by more recent strata. The Dyktyonema slate and limestone, with accompanying quartz, occur in the high mountain regions in two thick series—the lower with mica-schist, sometimes with alum slate, the upper with different colored and often quartzy slate; clay slates are found with a thickness of 1000 feet, and over these limestone, sometimes in distinct beds, covered in many

places by calcareous sandstone—in one place a lime breccia, in another a hard sandstone, containing several species of trilobites. The upper Silurian rocks may be named after their fossil contents, coral and sea-plants, etc. Silurian strata, with Diktyonema, are seen at Hulberget, 4000 feet above the sea; and at Tunsås, near Valders, with Olenus, 2500 feet high.

The Silurian formation was once far more extended than at present, as is shown by the prevalence of stratified marls, consisting chiefly of carbonate of lime, derived from previous Silurian limestones: fragments and blocks of the latter are scattered over some districts. Over the most recent Silurian limestone is more than 1000 feet of red and gray clay slates, containing, as far as known, no traces of life, probably corresponding to the Devonian period.

The Devonian formations are found only on three islands of Lake Mälar, as shown by characteristic fossils.

The Carboniferous formations are entirely wanting.

THICKNESS OF THE STRATA IN THE PALÆOZOIC FORMATIONS OF THE CHRISTIANIA FJORD.

			In the Christiania Valley.	In Skiens and Langesund neighborhood.
			Feet.	Feet.
Devonian.	Conglomerate		10—20	12
	Sandstone		1000—1200	1000
Upper Silurian.	Cochleat. lime		470—400	812
	Recent graptolite slate		400—160	
	Coral limestone	Period 7	280	704
	Pentamerus belt	" 6		300
Lower Silurian.	Lime, sandstone, and slate.	" 5	150—200	415
	Chasmop lime and slate, with cemented fragments.	" 4	700	310
	Vaginat. lime and older graptolite slate	" 3	250	610
Taconic.	Alum slate and stink-lime. Dyktyonema slate and olenus lime	" 2	160	16
	Quartzite	" 1	Wanting.	23

According to Kjerulf, there are eruptive masses more recent than the crystalline granites, syenite and porphyries; near Christiania fjord are large eruptions of serpentine granite, syenite, and greenstone in the high mountains, and near the boundary-line.

In some districts, recesses and dikes in the gneiss are filled with conglomerates and sandstones. The masses of eruptive granite form high and ragged mountains, often with grandly precipitous walls, the naked barrenness of which contrasts singularly with the fertile slate districts. In the great granite areas are a few marble strata surrounded by Labradorite; iron and copper pyrites, with much sulphur, are not uncommon; the strata of Silurian marble and other limestones may be 900 feet thick, occupying the uppermost part of the deposit, containing numerous fossils, as *favosites*, *encrinites*, *macra*, etc.

Of the Mesozoic formations, the Triassic, Jurassic, and Wealden are not found in Sweden. The Lias is found in the most southern part, in the neighborhood of Höganäs; the strata are quite thick, consisting of sandstone, clay slate, and plastic clay, with intervening strata of coal, the thickest of which is only four feet. This formation is poor in fossils, but a typical species, *Avicula inæquivalvis*, has been found.

The chalk occurs only in detached places in south-eastern and southern Sweden, the older strata consisting partly of whitish-gray limestone, containing numerous fragments of mussel-shells. In other places it is a sandy lime, with grains of green sand. The more recent strata consist of limestone, with chalk and flint nodules. Among the fossils found is a brachiopod (*Crania ignabergensis*).

No traces of Tertiary formations have been found in Sweden; the Post-tertiary period, however, there is of special interest to the geologist. The surface changes of the earth, which, from the end of the Silurian epoch, have occurred in the Old and the New World, have, as a general rule, not affected Sweden; the Devonian has left mere traces of its existence; the Mesozoic, in other countries so extensive and important, is found only in the southern part.

The Post-tertiary formations of Sweden and Norway show that, notwithstanding the great changes of surface experienced by the more southern portions of the European continent, the Scandinavian peninsula, up to comparatively recent times, has preserved nearly its ancient relative level above the sea, with the exception of the lias and the chalk in its southern

part. As on the American continent, at the beginning of the Post-tertiary epoch, the northern parts of Europe were elevated above the ocean, a diminution of temperature accompanying the increase of the land, which covered the whole country with ice—constituting the "Glacial period." Then came a subsidence beneath the sea, allowing the accumulation of marine, lake, and river formations, corresponding to the "Champlain epoch" of American geologists. An elevation of the land then took place—the so-called "Terrace epoch"—when the surface assumed the height and characteristics which we now see. The "Post-tertiary epoch," both in Europe and North America, was a period of high-latitude oscillations, as above stated—upward, downward, and again upward, and comparatively stationary.

The fields of loose soil, which occupy the plains as well as the valleys, river-basins, and many plateaus, are of two kinds: those which mark the sea-level, generally 500 or 600 feet above the present one, with clay and sandstone, are rich in marine shells and fossils of arctic seas, and show traces of old shore lines; the higher ones, with gravel and sand, but without large clay fields, contain no marine fossils.

It has been seen that the geological formations between the Carboniferous and the Post-tertiary are not found in Norway and Sweden, with the exception of the Lias and Chalk formations, which are found in Skåne and Blekinge, and of a few Mesozoic strata in one spot, in the extreme north of the province of Finmarken; that the Post-tertiary rests directly on the Palæozoic. The azoic rocks are more extended and thicker than in any other country of equal area. During the Glacial period the whole of Scandinavia was buried under the ice. The immense glaciers have left their marks in the furrowed land, striated rocks, deep valleys, extensive fjords, huge moraines, etc.; from the sea-level to almost the tops of the highest mountains, the rocks are grooved by striæ or scratches, their surfaces perfectly polished; the angular mountains have been rounded into *roches moutonnées*, and boulders are left even at the height of 5000 feet above the sea. Moraines—the accumulations of loose matter left by the melting and

retiring glaciers, composed of huge stones, angular rocks, gravel, sand, and clay,—are met with everywhere, at various elevations, and high up on the mountain-sides.

When the inland ice melted, many valleys were left for a long time ice-filled; the glaciers retreated, however, higher and higher; and, where they for a long period remained stationary, their moraines formed a dam for the water, which increased in depth, allowing the quiet deposition of the clay beds, now found here and there in the valleys.

In different districts the materials of the soil vary according to the geological constitution of the mountains over which the glaciers ground their way; clay or lime predominating, as the case may be.

The period following the Glacial was that of the Roll-stone, or Sand-ridges, the beginning of the Champlain epoch of the American geologists, followed by the deposition of the diluvial clays. Such ridges are very common in Sweden; the most remarkable are at Badelundsås, near Westerås, and Brunkeberg, in Stockholm; the celebrated mounds at old Upsala are situated at the end of such a ridge. They are formed of several strata, the lowest consisting of gravel with rounded stones, and above these sand, with interjacent clays; their height above the surrounding country is 100 to 150 feet, and their direction generally north and south. Other deposits during this period are sand as a coast formation, or in shallow water; stratified marl, and clay without lime or magnesia, deposited in a deep, calm arctic sea; and black clay, with variations of blue and gray, belonging to a later period, when the sea began to assume its present limits. The sand is found directly on top of the glacial gravel, from which it differs by its stratification, and its apparently washed condition; the stratified clays, and in some places the stratified marls, constitute the lowest stratum: the fossil mussel (*Yoldia glacialis*) shows that the sea from which the clay was deposited was an arctic one.

The clay on top of the marl is black clay, which merges into the common clay; in this occur fossil shells, the same as those living in the Baltic, such as *Tellina baltica*, *Cardium edule*, and *Mytilus edulis*. Enclosed in these clays and sands

are found large stones, probably carried by icebergs and dropped into the strata under formation; the same is the case with so-called erratic blocks found in many places in Scandinavia.

In the upper clays and sand are found, especially in the western part of the country, beds of shells of species now living in the North Sea, or still farther north. Such a bed is seen at Kapellbacken, near Uddevalla, and contains *Pecten islandicus* and others.

CHAPTER XVIII.

THE FJORDS.

Fjords of Scandinavia.—Their Walls and Terminal Valleys.—Action of Glaciers.—Terraces, or Sea-beaches.—Phenomena and Causes.—Shore-lines and Sea-marks.—Rising and Sinking of the Land in Modern Times.—Cannot be used as a Measure of Time.—Professor Kjerulf's Views on the Subject.—Iceberg and Glacier Theories.—Unequal and Intermittent Movements, and Long Periods of Rest.—Changes in Climate, and in the Distribution of Plant and Animal Life.

As one sails along the peninsula of Scandinavia, and especially on the coast of Norway, he sees everywhere the deep narrow arms of the sea winding their way, often a hundred miles, amidst the masses of rock belonging to the oldest formations; these arms of the sea are called *fjords*. Those of Norway are far larger and more majestic than those of Sweden, and partake of the grandeur of the scenery characteristic of the country. As you gaze in admiration, almost with awe, at their walls, towering thousands of feet above the sea, the question naturally arises, What are the causes which have formed these wonderful channels? As the sea has no sweep adequate to produce them, the second thought might naturally be that some great convulsions of nature have led to their formation; but neither the sea nor geological catastrophes have been active agents in this case.

Invariably at the end of a fjord there is a valley, with a stream collecting the water from the mountain-sides; these valleys are in all respects the continuation of the fjord, only one is land, the other water, and both are cut out of the solid rock; the same is true of the branch or transverse fjords and dales.

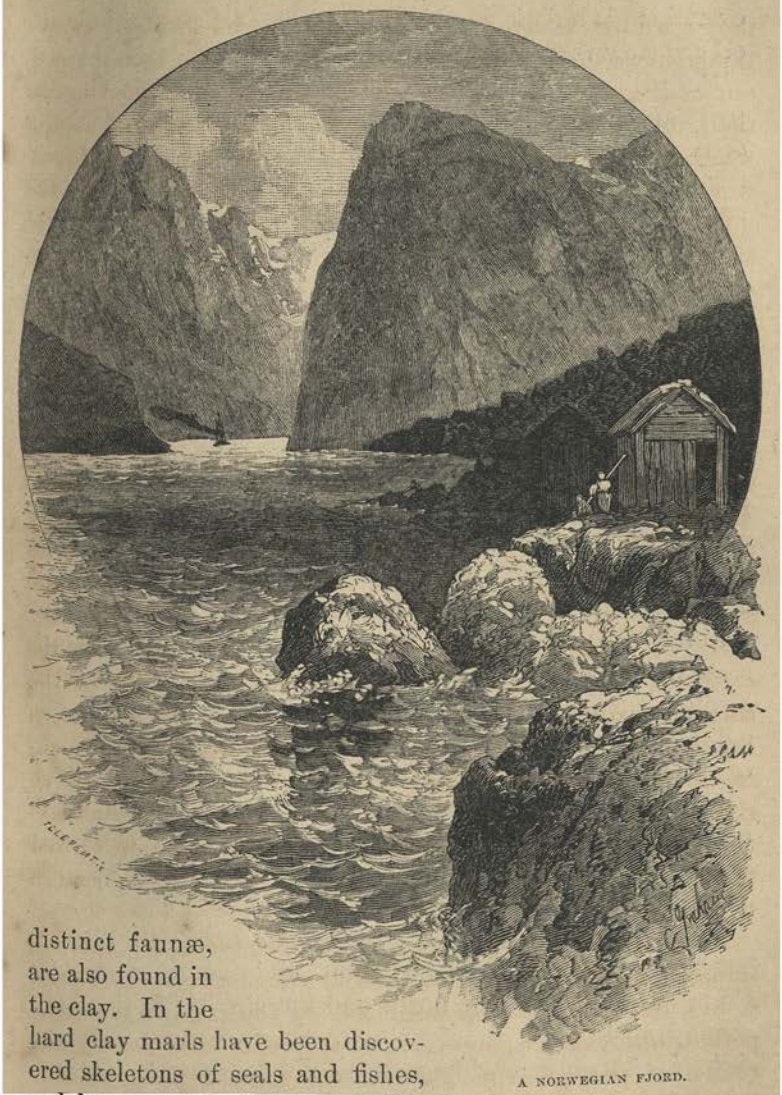
Everywhere you see the grooving, striation, and polishing due to the action of ice; numerous moraines, so extensive that

they are often covered with farms, fields, and hamlets; everything shows that the fjords, like the valleys, have been scooped out of the solid rock by the action of glaciers. Looking at the immense height of these walls, and adding the great depth, which is often equal to the height of the mountains, we cannot comprehend the vast periods of time that must have been required by the glaciers to do this work on their slow but irresistible march to the sea; and we get an idea, which nothing else can give us, of the tremendous power of water, in the form of ice, in modifying the surface character of the globe.

To this day there are in Norway glaciers at the upper end of the fjords coming down to the sea, silent but unimpeachable witnesses of the work they have accomplished, and are still continuing; as they retire, month after month, they leave on the rocks precisely the same marks which they did ages ago. Time, frost, and atmospheric agencies have obliterated in many places these ice-marks, and often the dirt and débris of centuries hide them from the common eye, while preserving them for the geologist.

Sailing along the fjords, the openings of the valleys, or the sheltered bays of the Norwegian coast, the attention of the traveller cannot fail to be attracted by the terraces, or sea beaches, rising one over the other in amphitheatre form, looking like broad gigantic steps. They suggest at once successive risings of the land, and different, more or less permanent, levels of the sea, into which the rivers and streams have carried down stone, gravel, sand, and clay, and spread them beneath the surface.

In many of the fjords are short steep valleys, whose entrance is barred by a terrace or two, surmounted by the blocks, stones, and sand of a moraine left by the preceding Glacial period; there are many lakes thus produced, following the course of the valley. The highest terrace, distinguishable from the moraine by its stratification, marks the oldest sea-level. Their height depends on the width of the valley, the amount of material deposited, and the duration of the subsidence; the oldest reach a height of 600 to 620 feet, and contain marine arctic fossils. Marine shells, and shell banks of two



A NORWEGIAN FJORD.

distinct faunæ, are also found in the clay. In the hard clay marls have been discovered skeletons of seals and fishes, and large peat beds occur in the plains. The lower and more recent terraces, from 50 to 150 feet high, contain fossils belonging to the present faunæ of regions below the polar circle on the coast of Norway. Immense banks of marine shells run parallel with the coast, and

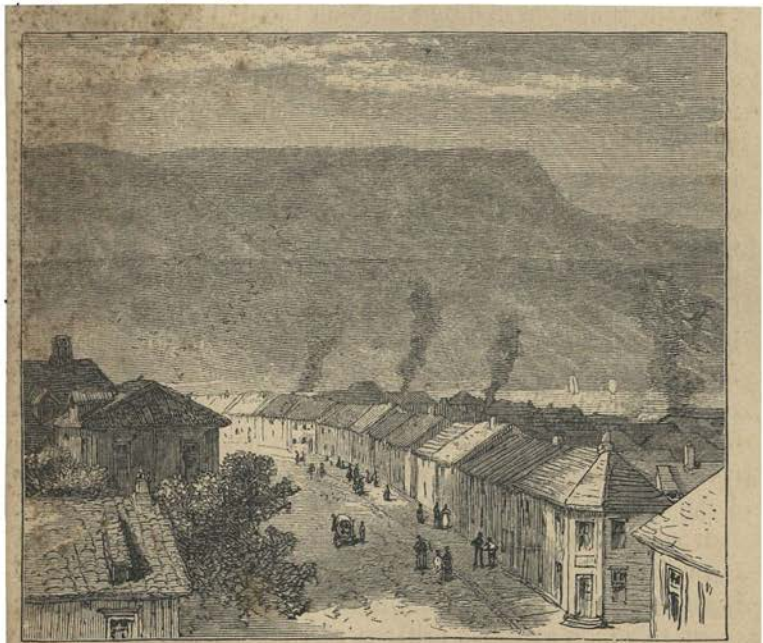
over them is a dark mould, as at Bodö. Other peat beds also occur below these later terraces.

Shore-lines, composed of cobble-stones, are met in different parts of the country; I have seen them on the northern shores of the Baltic, in the midst of coniferous forests, three in number, one above the other; also on the coast of Finmarken, back of Vadsö.

Sea-marks are seen on several points of the coast of Norway. I have particularly noticed them near the city of Trondhjem, where they are found at a height of 462 to 516 feet; near Stensö, on the Stavanger fjord; in Öster fjord, 138 feet above the sea; and also in Alten fjord. These marks do not correspond exactly with the height of the surrounding terraces, and must have been produced by the action of the waves, and would be much more common had not time and frost obliterated them in many places. The terraces, the shore-lines, and the sea-marks point to the great rising of land during the so-called "Terrace epoch," and to long periods of repose. But, if the above-mentioned facts indicate the upheaval of land just before the present era, there is also proof that there has been in some districts a subsequent local sinking. There are several distinct submerged steep beaches on the island of Gotland, at a distance from the present cliffs, which, owing to the clearness of the water, can be distinctly seen from the shores.

Observations have been made in Sweden for a number of years, in the Baltic, by inserting marks in the rocks, which show that the land in the northern part rises about two and a half feet in a century, while it is sinking in the southern. There is a remarkable ridge along this sea, from Ystad to Trelleborg and Falsterbo, no doubt produced by the sudden rising of the land in the north and the sinking in the south, accompanied by an immense movement of the ocean; this ridge would cause a wide sea between Southern Scandinavia and Northern Germany. Anterior to this these two portions of land were connected as a continuous continental area, across which plants, animals, and man migrated; the southern part being the lowest, the northern, still covered with ice, would be the first occupied by man—probably by a race of hunters.

As far as present data are concerned, all attempts to approximate closely to the number of years required to produce these results are unsatisfactory, as the uprising and sinking movements have been found unequal, and indeterminable periods of almost perfect repose or very slow upheaval have intervened. Estimates based upon modern observation show only that a vast period of time must have elapsed, without giving us any positive information.

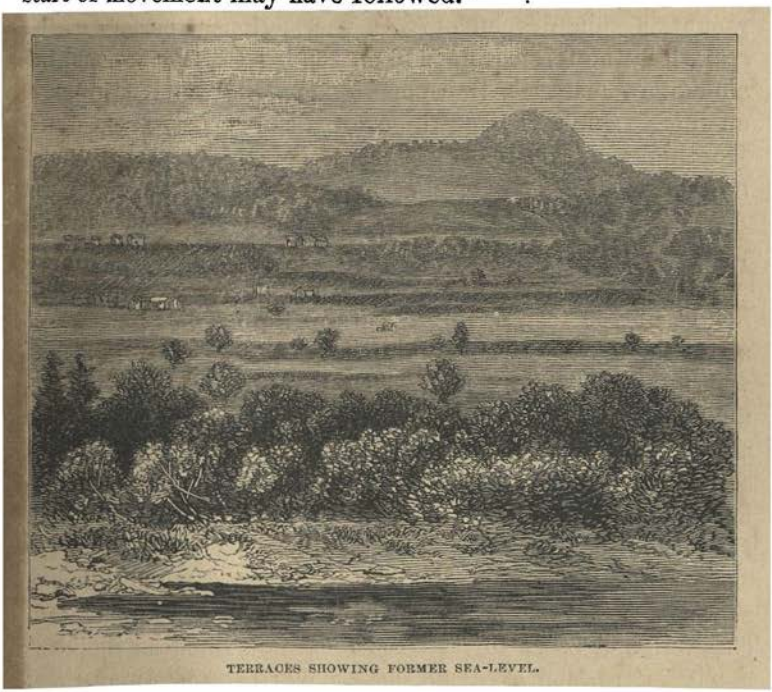


SEA-MARK NEAR TRONDHJEM.

The theory of the uninterrupted movement of the land, and consequently the calculations based by some geologists on the upheavals as a measure of time, have been denied by the eminent geologist, Theodor Kjerulf, Professor of Geology in Christiania, and author of the best geological map of Norway. His theory is set forth in a discourse on "The Upheaval of Scandinavia Considered as a Measure of Time," delivered at the meeting of the Scandinavian naturalists at Copenhagen,

in July, 1873, as follows, in a condensed form: "It is beyond dispute that the Scandinavian peninsula, at any rate in Sweden, is rising irregularly, but with extreme slowness: that a similar elevation has taken place in geological times, is clearly shown by the marine shells, clays, sands, skeletons of whales, terraces and shore-lines now seen at considerable heights above the present level of the sea, and at a distance inland." And again he says, "The highest marks on the mountains or in the valleys are the dividing lines on the dial of time, denoting the beginning of fresh movements; the hand is the present change of mutual level between land and sea." According to the iceberg theory of the glacier epoch—which, though as a whole unsatisfactory, must be called in to explain, in addition to the glacier theory, some of the phenomena on the borders of continents, and especially in Scandinavia—this peninsula sank down slowly under the arctic ice, the surfaces beneath were scored and grooved by the submerged and grounded bergs, and then the land slowly rose again to its present level. Accordingly, the measure of the present upheaval is, on an average, 2½ feet in a century, or 600 feet in 24,000 years; as the groovings are found to the height of 6000 feet, the time required would be 240,000 years; and, as the theory demands a double movement—a sinking and a rising, each of 6000 feet—we have 480,000 years required, and this on the supposition that the movement has been uninterruptedly equal. But this has not been the case; proofs are innumerable in Norway that there have been relatively quick movements alternating with comparatively long rests—in other words, unequal and intermittent movements. The fact that the drift contains no marine fossils; the uniform direction of the grooves, as a rule, and their immense numbers; and that a depression would have caused a warmer, and not a colder climate, are in favor of the glacial, and against the iceberg theory. The oldest shell-banks, containing fossils of a more arctic character than the present, are all high—about 500 feet above the sea; there are more recent ones, with fossils like those now living, between 100 and 150 feet above the sea: they are not found at all levels, but only at a few and certain ones. We see, in fact, "steps of movement,

and relative times of repose, under which those mighty masses of shells were heaped up on the coast at a certain level, and a start of movement may have followed."



TERRACES SHOWING FORMER SEA-LEVEL.

As to the terraces in the valleys, no open-lying ones are seen more than 600 feet above the sea-level, being made from the materials brought down by the rivers. Had the movement been uninterruptedly equal, there would have been formed a continuously declining plane instead of terraces; these last "are witnesses of a step, or start, in the movement; after that follows the relative rest." They extend only to the height of 600 feet, above which the groovings are made by glaciers, not by icebergs, so that no doubling movement is required, and no period of 480,000 years, but only 24,000 years, corresponding to an upheaval of 600 feet. "If we subtract," says the professor, "the height of the steps themselves, which express the proportionally quick change of level, and retain only the slowly declining, and apparently almost horizontal surfaces which

mark the intermittent times of probable gradual rise, there remains but a fraction, a very small fraction, of this time." Strand-lines, the signs of the beach engraved, as it were, on the mountain-side, depend only on the stationary surface of the sea, while the terraces depend on the level of the sea, and the amount of materials transported down the watercourses, and on more rapid changes—these are distinct from each other. He thinks the geological time to the Glacial period cannot be more than 24,000 years, as the highest level belongs to the Arctic Sea. "This movement has gone on in steps, perhaps with weaker and weaker starts, till the present time."

On the island of Torgö rises the famous Torghatten to a height of 760 feet, having a natural tunnel 350 to 400 feet above the sea-level; its height varies from 64 to 289, and its width from 36 to 88 feet. The power that could have removed such a mass of stone must have been the sea. There are similar tunnels on Moskenæsö, Grytö, and Senjen.

The changes of climate are as wonderful. All over Scandinavia—even in the part beyond the arctic circle and North Cape—the fossils show unmistakably that at the close of the Tertiary period the polar regions enjoyed a temperate climate, as warm as that of England and France; ferns, coniferæ, oak, chestnut, and other forest trees once flourished on Spitzbergen, Beeren Island, etc.; and these, now frozen, lands presented features of soil and temperature which rendered them fit for the sustenance of terrestrial mammals, and for man, if he then lived in that part of the world.

After the Tertiary period the elevation of the land brought on a Glacial era, during which the forests gradually disappeared, and the animals moved southward; the climate became colder and colder, vegetation ceased, and, without means of subsistence, most animal life disappeared, leaving only the reindeer, musk-ox, and a few other arctic species, which may have been witnesses of the Glacial period. Even these, should the glaciers increase southward, must move to milder regions or perish.

TORGHATTEN SEEN FROM A DISTANCE.

TORGHATTEN TUNNEL.

CHAPTER XIX.

THE GLACIERS OF SCANDINAVIA.

Immense Fields of Perpetual Snow.—Fountain-heads of Glaciers.—How they are called.—Glaciers North of the Arctic Circle.—Glaciers South of the Arctic Circle.—Different Limits of Perpetual Snow.—Study of Birth and Growth of a Glacier.—Causes of its Formation.

NORWAY stands unrivalled in Europe for the number and the size of its glaciers, and its immense fields of perpetual snow. The latter are called by the Norwegians *snebræ*, *snefonn* (plural *snebræer*, *snefonner*), and by the French *névé*, that is, the fountain-head, the reservoir, the source of the glaciers.

The principal perpetual snow-fields found within the arctic circle are:

Jedki, on the island of Seiland, between lat. 70°–71°, the glaciers of which run almost to the sea.

Jökel, on the Kvænanger fjord, about lat. 79°, with glaciers running into the sea.

Alkavare, on the Kölen range, near lat. 68°.

Almajolos, east of South Folden fjord, lat. 67°–68°.

Sulitelma, east of Salten fjord, north of lat. 67°, situated on the Norwegian and Swedish frontier.

Svartisen, between Ranen and Salten fjords, the greater part of which is north of the arctic circle, is the second largest snefonn in Scandinavia, with a length of over forty-two miles, and covers a space of about sixty-two square miles.

Between the Lyngen and Salten fjords, along the coast, occur numerous snefonner, between lat. 67°–70°, which are not named either in books or on the maps.

South of the arctic circle are:

Oxtinder, just below the arctic circle, south of the Ranen fjord.

Börge snefonner, near lat. 65°, covering a space of twenty English square miles.

Sibmek, south of Börge fjelds.

On the Dovre group of mountains rises Snehætten, 7400 feet high; a little south of it, Skredshö, 7300 feet; north-west of these are the Nuns fjelds, Stenskolla, and Skrimkolla, rising to a height of 6600 feet, all of which are clad with mighty fields of snow.

The Surendals range, east of Christiansund and north of Dovre, has large snefonner.

The Sundal range, east of the fjord of the same name, has large snefonner.

The Romdals fjelds, the highest mountain of which is Storhögda, 6500 feet, possess large numbers of snefonner.

The Horning fjelds have large snefonner, which extend as far as Stryn.

The Justedalsbræen,* the largest of all the fonner of Scandinavia, is situated between the Nord fjord and the great Sogne fjord, and covers a space of eighty-two English square miles.

Lom's range, east of Justedal, with several snefonner.

The Lang fjelds, which include a number of mountain ranges, with snefonner.

On the Jotun, the wildest and highest group of Scandinavian mountains, are found numbers of large fields of perpetual snow.

The Hardanger range, with a row of large snefonner.

The Röldal and Hallingdal groups have several snefonner.

The Folgefonn, on Sörfjord, a branch of the Hardanger, is the most southerly snefonn, and covers fifteen English square miles.

There are, besides, numbers of small snow-fields scattered here and there.

The limit of perpetual snow varies: On the island of Seiland, in Finmarken, lat. 70° 30′, it is at 2880 feet above the

* Iceland has on its south-east side a still larger glacier, the *Vatnajökul*, covering a space of about 240 square miles.

sea; in the mountains of Dovre, lat. 62° 30′, at 5200 feet; on the peninsula of Justedal, on the north-west side of the principal ridge, in Lodalen; Nordfjord, lat. 61° 47′, 4030 feet; in Befringsdalen Julster, lat. 61° 32′, 3570 feet; in Lundedalen Julster, lat. 61° 32′, it is as low as in lat. 70° 30 in Seiland, 2860 feet; at the end of Esefjord Tjugum, lat. 61° 17′, 4070 feet; in Vetlefjorden Tjugum, lat. 61° 22′, 3580 feet; in Bojumdalen Fjærland, lat. 61° 30′, it is found lower than on the most northern part of Scandinavia, 2470 feet; in Langedalen Hafslo, lat. 61° 24′, 3360 feet; in Tunsbergdalen-Justedal, lat. 61° 30′, 4570 feet; in Justedal (inland), lat. 61° 34′, 4650 feet; in the Jotun fjelds, for that northern part south of Ottavandet, lat. 61° 40′, 4610 feet; in Folgefonn, with Eidesnuten, south-west of Odde Vand, lat. 60° 3′, 3440 feet; in Blådalsholmene, lat. 59° 55′, 3940 feet; in Gjerdesdalen, lat. 61° 8′, 2480 feet, but becomes higher as the glacier retires. The glacier coming nearest to the sea next after the Jökel is the Suphellebræen, on the Fjærland, the lowest border of which is about 175 feet.

The glaciers are found as far south as lat. 61° 20′. The configuration of the country and the climate of Norway are particularly adapted for the formation of snow-fields and glaciers. Almost all, if not all, the latter are found within the western range of the peninsula, not beyond the influence of the sea. Mountains are great condensers of the moisture brought by the winds from the ocean in the form of rain and snow, according to their height and the season of the year. The large fields of perpetual snow of Norway form immense plateaus, in which a peak or ridge occasionally shows itself.

The study of the birth and growth of a glacier impresses one with the vast amount of time required for its rise and progress. After a certain height, on some of the mountains, the snow which falls during the year never entirely melts; the amount remaining, to which new layers are added from year to year, in the course of time forms an accumulation of immense depth, the source of the glacier. If the weather were always cold, and the snow always crisp, the formation of a glacier would be impossible, as the fall of snow in the course of time

would attain a fabulous height. As a rule, great falls of snow always occur with a temperature a little below freezing-point. Heat is required for the formation of a glacier.

These snow-fields of Scandinâvia during the summer months are under the influence of a powerful and long-continued sunshine, on account of their being so far north; and at that time the thaw of the ice and snow is very great. In the spring and beginning of the autumn great waste takes place from the rains; the water from the melting snow filters through the layers, and freezing cements the particles, and the lower layers are by pressure converted into solid ice. If the waste of the ice that melts every year exceeds the annual replenishment by snow, the glacier must naturally become smaller, and retires instead of advancing; if there is less waste by melting than the supply, then the glacier will advance. Advancing and retiring glaciers are found to this day in Norway, while for years past those of Switzerland are retiring. In Scandinavia the glaciers are more numerous and largest south of the arctic circle.

CHAPTER XX.

THE SOGNE FJORD.

The Sogne.—Entrance to the Fjord.—Depth of the Fjord.—Its Lateral Branches and their Depth.—Bönder on board of Steamers.—Third-class Passengers.—Valley of the Fjords.—The Fjærland Fjord.—Glaciers.—Leaving the Fjærland.—The Sogndal Fjord.—The Sogndal Valley.—Superb Fjord Scenery.—A Beautiful Cone.—The Lyster Fjord.

Of all the fjords of Norway none can rival in size, grandeur, bold outlines, weird and sombre landscape, the magnificent Sogne. No tourist should fail to sail upon its waters. The entrance, which is formed on the west side by the Sulen islands and others, and on the east side by the main-land, is at about 61°, and the main course winds its way inland almost directly east. The depth of the sea is remarkable. South of Yttre Sulen it is about 600 feet deep; farther inland, between Big Store Hilleö and Stevsundö, 1584 feet; a little farther up it diminishes to 1200 and 900 feet, and immediately south of Bö Church it attains the enormous depth of 3980 feet; north of Arnefjord Church, 3222 feet; at the entrance of the Aurland, 3766 feet; and just south of Kaupanger, 2964 feet. The branch fjords are much narrower, but their depth of water is also very great. The Sogndal, at its entrance, which is narrow, is 132 feet deep, but about midway is 1194 feet, thence becoming, near its end, 216 feet deep. The Lyster is at its entrance 2170 feet deep; half-way, 1176 feet; towards its end, 276 feet. Even in the Aardal and the Lærdal, which form the upper end of the Sogne, the sea in the former is 840 feet, and in the latter 780 feet. The average breadth of the Sogne varies from three or four to about two miles, and its length in a direct line is over three degrees of longitude, or a distance of about eighty-four miles, with its windings.

There are several lateral branches extending north and south, besides deep bays or coves. On the northern shore are the Vadeim and Fjærlands, the latter fourteen miles long; the Sögndal, ten miles, and the Lyster, twenty-four miles. On the southern shore are Brekke, the Arne, and the Aurland, the latter being sixteen miles long, with its branch, the Nærö, about six miles. No description can give to the reader an adequate idea of the magnificence of the scenery of these narrow lateral fjords of the Sogne.

On a beautiful day, at the beginning of July, I found myself for the second time in the quaint city of Bergen, waiting on the Square to hear the whistle of the steamer which was to convey me to the Sogne, my purpose being to stop at some convenient point on the way, and wander thence wherever my fancy might lead me. The sail from the city and back requires four days, and steamers start twice a week. The crowd began to gather, and boat after boat left the shore, loaded with people. After the usual confusion of a starting steamer, we got under way.

Leaving the city, the steamer winds its way northward for about sixty miles in the midst of wild scenery. The forepart of the vessel was crowded with passengers, mostly farmers and fishermen, going home with trunks, baskets, and hampers. The women and young people were especially lively, for many had been to Bergen for the first time, and were delighted with the city that had appeared so large to them. Such fine stores, so many pretty things, they had never seen before, and they had been buying a number of articles.

There is one thing a bonde will never do, no matter how rich he may be, and that is to buy a *first-class* ticket; for him money expended in such a manner is utterly wasted, over which he would mourn for a long time. Not that he is mean, for he is far from it; but he prefers to spend the money for value received—that is, to treat his friends on the passage. He has not the slightest inclination to mingle with the people of the cities, many of whom, here as elsewhere, look down on these tillers of the soil, making fun of their clothes and manners, and refusing to mix with them, even on the deck, through

fear that their standing in society might be lowered. Besides, if a farmer were inclined to take a first-class ticket, he would refrain from doing so, lest he should be ridiculed by his friends, who would think that he was putting on airs, and wanted to appear like a herre (gentleman). In fine weather the third-class or deck passage is good enough for him and his family; in case of storms or cold weather, he gives a sigh when compelled to take the second cabin, where he finds a comfortable shelter but no state-rooms; plain wooden benches and tables constitute the furniture, and upon these and on the floor they rest the best way they can. But the majority keep awake all night. The second cabin is usually filled with tobacco-smoke, through which you distinguish a very jolly crowd, who, with those on deck, certainly have the best time on board; they laugh and joke, play cards, eat, and seem bound to enjoy themselves before returning to the farm and hard work. Many are going home quite happy with their sales or purchases. The invariable question in Norway is, "How much does it cost?" for the people want to know the price of everything.

It was always a great pleasure to me to mingle with these bönder on board the steamers, and get an insight into their character — to do what they did, and be like one of them; many an hour have I thus passed pleasantly, and many a kind friend have I made in this manner.

The route to the Sogne fjord is among so many islands that it often seems as if you were sailing on a river; the scenery at times is extremely fine. The greater part of the country is uninhabited; now and then the sea is so completely land-locked that it appears as if the journey was ended, when suddenly comes into view an opening, and another broad expanse of water stretches in the distance; the channel is sometimes so narrow and tortuous that the vessel almost touches the rocks.

The steamers seldom come alongside a wharf, they simply lay-to. A large boat starts from the shore to bring in or take off the cargo. Numbers of smaller craft come with passengers, and take those who are to land—often an indescribable confusion takes place; the boats jolt against each other; the

people shout one to another; goods, horses, cows, sheep, passengers are going or coming at the same time trunks are passed up and down the narrow gangway. Here a party leap from boat to boat till they come to the right one—a man hurries back to recover something he forgot—a woman urges on her husband, who is still on deck, fearing that they may be left. An individual reaches the vessel in a profuse perspiration from the excitement produced by the fear of missing the steamer; he had in his haste tumbled down into a woman's lap, who, instead of getting angry, laughed heartily. From a boat men halloo in vain to the captain to stop. What I admired was the urbanity of all the officers. In the tumult, no matter how annoyed they may have been, no profane language from their lips fell harshly upon the ear.

In about six hours from Bergen the entrance of the Sogne is reached, where it is six or seven miles wide. Skirting the southern shore you pass a grand mass of rocks. The Sognefest (the castle of the Sogne) is very bold in its outline, and apparently forming two sides of a square. The scenery spread before the traveller is superb, a panorama ever changing in its views of snow-topped mountains: in the north the Justedal glaciers, towering mountains in the east, in the south the snowfields of Fresvik. The vegetation improves as you penetrate inland; the bases of the mountains and hills are clad with woods. On the northern side is a narrow fjord, on the shores of which, at its upper end, is the hamlet of Vadeim, with its white-painted houses and two or three farms. The steamer here stops at a wharf to land passengers and discharge cargo. Here a high-road leads northward to the Forde fjord and to the Julster Vand.

The valleys by the fjords are often quite fertile and well cultivated, contrasting singularly with the barren mountains which surround them. From the water they appeared to form an oval basin with a ravine at the end, towards which the mountain-sides sloped gently, evidently hollowed by the agency of ice and water. Sometimes two ravines entered the valley like radiating branches. At the base of the mountains the terraces rose one upon the other to the number of three or four.

At about sixty miles from its entrance the Sogne seems suddenly to end at the base of high mountains; it sharply turns northward, and the island of Kvamsö is passed, and a few miles farther the main fjord runs once more eastward, while to the north is the entrance of the Fjærland, the first large branch of the Sogne.

The steamer stops at the thrifty hamlet of Balholmen, opposite to which is Vangsnæs, the scene of Frithiof's "Saga." Sombre is the Fjærland with its mountains, glaciers, and its wild scenery. Streams fed by the melted snow and the ice run down on every side. In the mountains above are the Langedals and the Björne glaciers, rising to 4500 and 4780 feet above the sea. A little farther north, on the west side, are the Svære and Vetle fjords, between mountains, the highest of which, the Oatneskri, rises 5000 feet. At the end of the Vetle fjord there is a road of a few miles, leading to the great ice-field of Justedalfonn. As you sail farther inland still higher mountains loom up on both sides of the fjord—the Melsnipa, 5620 feet; the Gunvords and Stendals glaciers, 5200 feet. The water is of a peculiar opaque light green, showing the effect of the numerous streams from the ice. Three valleys diverge from the lowlands at the end of this fjord; the two most interesting are the Suphelle and the Boyum. The first is a long, narrow ravine, enclosed between rugged mountains; its glacier, about four miles from the sea, is fed from the slides of another, with which it has no direct communication, the masses of ice falling from a height of two or three thousand feet. The Boyum is west of Suphelle. The mountains are steep, with birch-trees to a great elevation, above which is the glacier.

In the year 1868 a large number of avalanches occurred in different parts of the country, occasioning loss of life and property. On the Fjærland, on the west side, one descended of such a size that it formed a bridge over the fjord—at that point five thousand feet wide—upon which the people crossed. If I had not been told this by several trustworthy persons, I would not have believed it, so incredible does it appear.

Leaving the Fjærland and again ascending the Sogne fjord, the scenery becomes more cheerful—woods, fields, and meadows, hamlets and farms, are more numerous; at the base of the mountains the woods crowning even some of the lower hills. Here is the hamlet of Fejos, while the Fresvik snow-field, rising 5000 feet, towers over all. On the northern shore, almost opposite, is Lekanger, the largest congregation of farms I had seen on the fjord. Two streams from the Grindsdal and Henjumdal—two valleys a few miles apart, both formed by the Gunvord glacier, 5000 feet above the sea-level—empty into the sea here, and give water-power to numerous grist-mills.

A few miles farther up, on the northern shore, is the Sogndals fjord, with its weird scenery, its fruitful tracts, and transverse valleys, over which farms are scattered. The sea here is also discolored by the streams from the glacier. In the mountains are found numerous sæters. The village of Sogndal possesses a number of houses, built close together, and here the steamers stop at a wharf. The population is about five hundred. The district is celebrated for orchards of apples, and also for its *gammel ost* (old cheese), which, when old enough, is the strongest known, and, after one gets accustomed to eat it, an excellent appetizer.

From the Sogndal the scenery of the Sogne is superb. On the northern shore rises Storehog, 3830 feet—opposite, Blejen, 5400 feet; and the fjord between them is about two miles wide and 2900 feet deep. Many of the mountains rising from the fjord are torn; in some places birch, fir, or pines are seen to a great height; a solitary farm, a saw or grist-mill, meets the eyes. Fifteen miles above the Sogndal fjord, on the northern shore, are the small hamlets of lower and upper Amble, and Kaupanger church. These are situated on the shores of a lovely bay, of oval shape. The lower hills slope gently towards the sea, and are clad with woods to their very tops; while groves of different trees, the elm, the linden, the birch, and other trees, grow here and there. Two beautiful streams fall into the sea, and on their banks are little grist-mills. Meadows, yellow fields, and patches of potatoes were scattered around the farms. On a sunny day the place is ex-

quisitely beautiful. How many of these picturesque spots one finds on the fjords: they burst upon you when least expected. A little farther, entering the Lyster fjord, one beholds a beautiful and extended panorama of mountains and water. Snow and glaciers meet the eyes in the higher regions; while a farm, a hamlet, or a church, shows that men live by the sea, in the midst of this grand and stupendous nature.

Some ten or twelve miles inland, on a promontory on the eastern shore, is Urnæs, from which an excellent view of the fjord presents itself, with its ranges of hills and spurs coming down to the sea. On the western shore, opposite Urnæs, is Solvorn, picturesquely situated in the hollow of the mountains.

CHAPTER XXI.

THE JUSTEDAL SNEBRÆER.

The Justedal Glaciers.—Vast Snow-fields.—The Justedal Valley and Church.—The Nygaard Glacier.—Faaberg.—Dirty Farm-houses.—Not Prepossessing.—Bed Sheets.—A Sæter.—Appearance of Lodal's Glacier.—A Superb Ice-cavern.—March of a Glacier.—A Glacier a River of Ice.—Motion of a Glacier.—Moraines.—The Stegeholt Glacier.

This field of snow, the largest in Scandinavia, covers a continuous tract of over eighty-two English square miles, its depth in many places reaching 1000 feet. It comprises the area bounded on the north by the Nord fjord, on the south by the Sogne, on the east by the Justedal valley, and on the west by the Sönd fjord. Its lower part is entirely fringed by glaciers, which flow in every direction. The glaciers in the Fjærland fjord are three miles inland; the extremity of the Boyum being about 400, and the Suphelle 160 feet above the sea. The backbone or rocky ridge of this mass of snow has an average height of 5000 feet, the highest point, lying between Stryn and Justedal valley (Lodalskaupos peak), reaching a height of 6410 feet in the eastern and 6110 in the southern part.

At the head of the Gaupne fjord, on the Lyster, is the valley of the Justedal, which derives its name from the great glacier which overtops its mountains. At the entrance is the hamlet of Röneid, with a comfortable inn, where horses can be procured. A narrow road, used as a bridle-path, and passable with a cariole for a distance of six or seven miles, leads to the end of the valley. About fourteen miles from Röneid stands the plain parish church of the valley, surrounded by a rough stone wall, and the humble church-yard with only a few wooden crosses. The adjacent parsonage has a small garden and a few patches of barley and potatoes, and may be said to be the only clean and comfortable place in the vicinity.

A few miles farther on is the Berset glacier, the first in the valley, and near it is the poor hamlet of Nygaard. From the deep-blue cavern at the base of this glacier flowed with great force a dirty stream into the valley, and close to the icy edge was a parallel line of boulders, stones, and sand, left behind by the retiring mass. Beyond this were several other transverse ridges, formed by similar deposits, showing that the glacier is fast retiring. Two or three little streams had worn channels in the ice, and water was trickling all along the sides.

NYGAARD, OR BERSET GLACIER, FROM THE BRIDGE.

After a pony ride of twenty-eight miles I came to Faaberg, the last hamlet of the valley, containing several well-stocked farms, and surrounded by verdant fields and meadows. The hills were clad with birches to a considerable height, while the upper part of the plateau was crowned with snow and fringed with ice. The comforts were very few, the houses uncleanly, and the fare very poor for those not accustomed to "rough it."

Fleas were abundant, as in a great many other districts of Norway, and here proved quite a plague. Most of the females were at the sæter, so that at the farm where I stayed the daughter of a neighbor came and prepared my meals, consisting every day of bread, butter, cheese, eggs, and milk. I was honored with a cotton table-cloth, which had been used before, as a large egg-spot of the size of my hand was unpleasantly apparent. That this table-cloth was used at night as a sheet on my bed over the hay was certain, as the large egg spot was there; in the morning this sheet did duty once more as a table-cloth, and continued to fulfil the requirements of the table and the bed alternately till my departure. This hamlet was one of the few places where I found the prices exorbitant, even to extortion. To these people every tourist of foreign birth is a mine of gold for them to work.

From Faaberg the path was extremely rugged. The ceaseless noise of the rushing river, formed chiefly by the glaciers of Björnesteg, Lodal, and Stegeholt, at times was so great as to drown the voice.

Above the Björnesteg glacier was a sæter with numerous small houses, and numbers of women and children were in charge of the sheep and the goats. The people were kind-hearted, and insisted on my taking a draught of milk before leaving. Winding our way for awhile through meadows and woods, we saw in the distance, at the end of the valley, Stegeholt and Lodals glaciers; the summit of the peak is 6410 feet above the sea. At the end of that wild valley was the usual moraine, with rounded stones, pebbles, and sand, left by the retiring glaciers. The streams from them divide and meet again; the current was very strong, and the water so dirty that our horses were almost afraid to cross. One would naturally think, not knowing the laws which govern the movement of a glacier, that a stream created by the melting of pure ice could only produce the clearest water; on the contrary, the very nature of a glacier prevents any other sort of stream, as has already been shown. In June, and even in the beginning of July, these streams are unfordable. The Lodal glacier was covered with dirt, stones, and débris from the mountain-side. Its cav-

ern was by far the finest and longest that I had seen, being about twenty-five feet wide; from it a turbid river rushed with great force. The beauty of this cavern cannot be adequately described—the blue color of the ice gradually became deeper, finally merging into an intense inky-blue. Owing to the great pressure, every air-bubble had been expelled, and the whole mass was clear and transparent; the cavern appeared like a tunnel cut through a mountain of sapphire. Unfortunately, I could not explore it, on account of the great depth and velocity of the water, as it ran between two stone ridges, split by the ice. The retiring glacier had uncovered part of a spur or hill of gneiss, which had obstructed its march, and which was split into several enormous parts, which were still in contact with each other. A considerable number of boulders were resting on the frozen mass, some supported on pillars of ice, which were prevented from melting by the protecting shade of the stones. In places the glacier was white, not from snow, but in consequence of the cracking of its surface and the numerous air-cells. It was easy to see that the Lodal had formerly been much lower down the valley, and that the transverse glaciers we had met on the way were once its lateral branches, the whole forming a single vast frozen river, reaching the sea, retiring, advancing, and again retiring. Thus the ice ground deeper and deeper into the rocks; the same marks were visible, left by that which had retired the year before. I heard a rumbling sound, and had hardly raised my eyes when a huge stone from the glacier rolled within a few feet of me, and I had hardly seated myself the second time when I saw another stone roll down, carrying with it in its flight several lesser ones.

A glacier is not an immovable mass, closely attached to the mountains, but a body slowly impelled forward by the immense pressure of the upper portions. On its way the mass slides down, grinding its rocky bed, thus deepening and enlarging its channel day by day; its silent power, overcoming all obstacles, carries with it whatever has been buried in the icy stream, such as stones that have fallen from the mountain-sides, earth, and sand, which combine to render the water turbid, and to

form the moraines. It has the character of a stream; it is a moving river of ice, fed from the Snebræer, or perpetual snow-fields above, modifying or creating its channel, eroding valleys, often covering vast areas—an agent of great destructive power.

The motion of a glacier, being due largely to expansion from the consequences of its melting, is slower at night than during the day, and in winter than in summer; the movement is greater in the middle than on the sides, where it is held in check by friction, and also more sluggish at the bottom than at the top. A glacier will accommodate itself to the sinuosities and unevenness of its bed, expanding or contracting like the waters of a river, and will precipitate itself over a ledge, making a cascade of ice: these I have seen in almost every glacier of Norway. The ice is often broken transversely, the moraines are engulfed in the crevasses and lost. The main glacial stream starts with a moraine on each side; long dark bands raised above the ice are formed by the stones and earth which have fallen down the side of the mountain, in the same manner as the heaps of stones and débris we find at the bases of mountains, and in many ravines and valleys. These lateral, or marginal, moraines vary in height, according to the amount of the deposits massed together, and to the time of their formation; they range from a few feet to twenty feet in height, but never much more, for there is no time for accumulation; the material is collected as the ice moves downward, and the motion of the Norwegian glacier may be a few hundred feet a year. These moraines stand in regular ridges, and are slowly and surely carried to the end of the glacier; their origin, by the materials, can often be traced back for great distances. As the frozen river moves onward, it is joined by others, all uniting in one solid mass; the moraines meet side by side, and remain distinct on the journey down. The number of these moraines indicates how many branch streams have united with the main trunk. Sometimes a glacier is compelled to make its way through a narrow defile; then the mass of ice contracts, and becomes deeper, and a grinding process takes place on the sides and at the base with immense force; many valleys with perpendicular walls have been formed in this manner.

Not far from Lodal is the very interesting glacier of Stegeholt, reached by again fording the Lodal River. The end of this glacier is narrow, and the ice comes through a contracted gorge, choked with large stones, which prevented me from seeing the terminal cavern. A bridge could easily have been built over the stream, but in those districts there is no one to undertake such a work, and no one to guide you over the ice.

On the left bank, to a certain height, birch-trees were abundant, and there was a dense growth of grass and weeds within a few yards of the ice. Here, also, I saw evidence that the ice had much diminished that year. Numerous large boulders, forming longitudinal moraines, were stranded along its sides. The crevasses indicated a powerful strain; through the cracks, which crossed the whole breadth of the glacier, you could see the deep-blue color, growing darker and darker with the increasing depth.

We have now given a description of retiring glaciers. Further on we will speak of those which advance with an irresistible power.

CHAPTER XXII.

Two Pleasant Acquaintances.—An Invitation to visit Krokengaard.—Arrival at the Farm.—A Venerable Host.—A Family Gathering.—A Lady from Holland.—A Game of Croquet.—Delicious Fruits.—A Gentleman's Home.—Life by the Fjord.—Industrious Families.—Scandinavian Hospitality.—Parting Dinner.—Farewell to Krokengaard.

On a warm July day I was crossing the Lyster fjord on my way to Krokengaard, on the eastern shore, almost opposite the Gaupne fjord, at the head of which is the valley of Justedal. There was not a breath of wind, nor a ripple on the sea; the rays of the sun fell upon the boat with great power, and my two boatmen were bathed in perspiration. Krokengaard stood at the foot of a high hill, and its buildings were surrounded by trees and golden fields of nearly ripe barley; fir and birch trees grew to a great height on the mountains, whose tops were hidden by fleecy clouds. The situation of this old homestead was well chosen, as there was no danger from avalanches of snow or rock.

My invitation to visit this place was characteristic of the hospitality of the country. A few days before, on board the steamer, I had made the acquaintance of two ladies—sisters; women can always travel safely alone in the country, and are sure of meeting with respectful consideration. I had been invited by them to visit their uncle, who, they were sure, would receive me with great pleasure; they seemed sorry for me, thinking that I must feel very lonely—a stranger in a strange land, travelling in almost uninhabited districts, living with the poorest people, eating coarse food, and enduring many hardships. The elder was a doctor's wife, living near Bergen, and, with her sister, was on her way to Krokengaard, their uncle's place, on a summer visit. Their last words to me, as they

stepped from the deck of the steamer into the boat, had been: "Do not fail to come to Krokengaard on your return;" this was said with that peculiar Norwegian accent and soft voice which made the English they spoke sound the more pleasantly.

As we neared the shore the sound of our oars attracted the attention of the people who were working in the fields. We landed at a sheltered spot, where a boat lay stranded on the sand, and made our way by a wide path through fields and meadows for a few hundred yards to a low stone wall surrounding a garden. Opening the gate, I entered an orchard of apple and cherry trees, both loaded with fine fruit of different species; there were also plums, currants, and gooseberries. The walks were lined with bushes in full bloom, and the place was filled with birds which had come to feed upon the fruits.

Knocking at the door of the old-fashioned white farm-house, a young lady presented herself, of whom I inquired if Captain Gerhard Münthe was at home. I was ushered into a room, where I found a handsome white-haired gentleman engaged in reading, who, as soon as he saw me, came forward and welcomed me in that courteous Norwegian manner which made me at once feel quite at ease; his young wife, with a pleasant smile, also received me very kindly; from the library, where I had been entertained, I was led into the parlor, where several ladies were chatting, busy with their needle-work. I was introduced to two daughters by a former marriage—fine-looking young ladies—and recognized among the company my two companions of the steamer, who, as I could see by the warm reception accorded me, had spoken about my coming; by their pleasant smiles I knew they had not forgotten me. After a general introduction, wine and cake were offered, and the venerable captain, looking at me, said, "Welcome to Krokengaard," and we bowed to each other. There was something so pleasant, so frank, and so amiable in the manners of every one, that the uncomfortable feeling which is apt to come over one when first entering the house as an entire stranger soon disappeared.

"We are all to dine," said the host, "with my brother and sister, at their home, and you will go with us. You will be welcome there also." The brother, a bachelor, welcomed me

in French, and the sister in Norwegian. They had invited all the members of the family for the day. The captain took my arm as we entered the dining-room; the Norwegians having no smörgås, the dinner began at once. The captain took the head of the table, being the eldest of the family, while I was on the right of the host, and a niece by marriage, a lady from Holland, was on his left; her husband, a nephew, an artist living in Düsseldorf, had come here on his wedding tour, to see once more the old homestead; the brother was at the foot of the table, the sister in the centre. The dinner was good and substantial, and a sheep had been killed for the occasion; claret was served, and the first toast of welcome was given in my honor by the owner of Krokengaard in a complimentary speech. We spoke seven languages at table—Low-Dutch, which some of the young ladies had learned in order to converse with their cousin—French, English, German, Swedish, and Latin. This will give an idea of the education of the well-to-do people of Norway. Each person present, with the exception of two, understood, more or less, at least three languages besides their own; some understood the whole seven, and others in addition; we had many a good laugh, for it almost seemed as if we had come from the Tower of Babel, such was the confusion of tongues. The topics of conversation were very varied, showing that the company had had a wide range of observation and culture.

I was much amused with the Dutch lady, who seemed afraid that I did not recognize her nationality; several times she took particular pains to let me understand that she was from Holland, and that Hollanders were very unlike Germans. At that time the feeling of the mass of the people in Norway and Sweden was intensely French; their sympathy for France was very earnest, and they almost felt as if the war was in part sustained by themselves; this feeling was exhibited wherever I travelled, and no doubt had been intensified by the Prusso-Danish war.

After coffee and an exciting game of croquet, we went into a little orchard, and there helped ourselves to the cherries, ox-hearts, currants, raspberries, and gooseberries; this was a rare

treat to me, for the year before I had not tasted anything of the kind, as in most districts the farmers do not cultivate them. I did not wonder that Krokengaard was celebrated for its fruits. The plum-trees were loaded.

My room commanded a fine view of the fjord and the snow-capped mountains and glaciers; in the morning I was awakened by the singing of the birds, which are never disturbed by guns here, though their depredations are considerable.

The quiet of these Norwegian farms along the sea, standing alone by themselves, is very striking. They often occupy only narrow tracts of land covering the rocks, with high mountains at their back, and the water of the fjord in front; and with good land, and fir, birch, and other trees growing on the declivities or the tops of hills, to furnish fuel; surrounded by a few fields and meadows; the sea the only highway.

At some distance from the house was a beautiful stream of clear water, coming down from rock to rock through a transverse narrow gorge, which fell perpendicularly, from a height of about thirty feet, and then the stream flowed over a bed of clear gravel, the water being so limpid that one could have counted every pebble beneath. Along its shores are scattered beautiful white-trunked birch-trees; while near by was the dark weather-beaten house of the working farmer of Krokengaard. On the bank of the river, higher up, was a little grist-mill, used for grinding the grain used on the place. This secluded corner by the stream and the fall, with its meadows, woods, and rocks, was the prettiest spot on the farm. Many such a picture as that of Krokengaard is to be found along the fjords of Norway.

Captain Gerhard Münthe, owner of the estate, enjoyed a literary reputation among his countrymen, for he had written a good history of Norway in his younger days. Often two or three such farms, not far from each other, belonging to the members of the same family, are together. There you find the comforts and the refinements which education brings. The rooms are furnished nicely, though plainly; every part of the house is exceedingly clean; the larder is well provided, and there is always a little stock of wine in the cellar for the use

of friends when they call; the servants are very tidy; there is always a good kitchen-garden; flowers are cultivated abundantly; the orchard is carefully kept; the farm buildings and the fences are in good order; the cattle fine; the fields well ploughed; and there is throughout a high order of cultivation, and a keen appreciation of the beauties of nature; the trees and rocks are loved, and all the advantages that can be taken of the picturesque spot are eagerly improved. A little summer-house by the bluff; a bench under a tree, from which a fine view may be obtained; a bathing-house built by the sea, or by the mountain brook; a well-painted and stanch boat, in which to row and fish; and a fine sæter back in the mountains, are among the usual appointments. In the house there is generally a piano, and sometimes a harp, a guitar, or a violin, for music is cultivated. There is also a little library, a Bible, and other religious works, and a variety of useful volumes. On the parlor table one generally sees some of the latest publications, an illustrated paper for the children, and the newspapers from the large cities, which come by the post-steamers, weekly or semi-weekly, bringing the latest news, not only of Norway, but of the world, flashed across the wires. The steamers which carry the mails stop at many single places along the fjords, and reach their very extremities, for there are post-stations everywhere; the hours of their arrival are fixed; the people watch anxiously, and immediately after the steamer stops a boat is sent to receive the mail, or a boy goes after it by the mountain-path. Letters are among the treats which are awaited with great anxiety by the family: the wife hoping to hear from father, mother, or friend; the husband expecting his business correspondence; the daughter awaiting tidings from her dear friends in the cities, or from some school-mate, or from her lover, or a brother who has left the paternal roof to make his way in the world. Something is always looked for, and there is great disappointment when the messenger returns empty-handed. Driving is out of the question in these places, for there is no road, and the horses are used only for farm purposes. The education of children is not neglected; they are taught the truths of the Bible, but not in

that austere way which often makes the young dislike religion. Everything that tends to produce intellectual development receives attention according to the means of the family, and great sacrifices are made in order to give the children a good education, and even to send them to the cities to pursue the higher branches. The girls are taught to be good housekeepers, and are skilful in all kinds of needle-work, embroidery, and knitting; they weave and make their own dresses, and there is always a sewing-machine in the sitting-room; so that when they marry they are capable of taking care of themselves and their families. The life is essentially a home-life, rich in domestic comforts; solid culture is sought after, rather than superficial accomplishment, for the wife is often the only companion to cheer the otherwise lonely hours of winter. The people are acquainted with the current literature of their own country and scientific progress of the world, and the works of foreign countries are often found in humble homes. The children are taught music, and occasionally there is a visit from the neighbors, when young and old indulge in the pleasure of a social dance. The church is often far off, and the only way to go to it is by water, so that families attend public worship only a few times during the year, when the Lord's Supper is administered, or at the confirmation of the children, or when the weather is very fine. This rare attendance at church, however, does not seem to lessen the faith of the people; indeed, it seemed to me that the more lonely they are the more religious they become.

In these Norwegian households the wife is industrious, and the life of the mother seems to be given to the duty of making her home happy. She is devoted to her husband and her children; she generally teaches the younger ones herself. The husband often prepares his boys for the higher schools, besides superintending the farm work, and carrying it on with system and economy, and calculates how much the crops will yield; how much butter and cheese can be spared and sold after laying up the year's supply; and how the wood of the forests can be economized and husbanded—for trees do not grow fast, and are becoming scarcer every year, and people

must not be extravagant with their fuel. Occasionally, turf is burned also. He has to see that the right-sized trees are felled. Now and then a few large fir and pine trees are cut down, either for building purposes or to be sold, to increase the household fund when the crops are unremunerative, or perhaps to give aid to a poorer neighbor, or to pay the expenses incurred by receiving more company than was expected, or by a prolonged visit to the city. Generally speaking, there is no abundance of money, and economy is necessary. No people are more generous, hospitable, or warm-hearted; meanness and stinginess are foreign to the Norwegian or Swedish character, and, considering their resources, there is no other country where the stranger is so kindly received and so hospitably entertained. I have lived in the mountains with people who occupied poor log-houses, and whose sole food was potatoes; but the little they had they heartily placed before me, and I had great trouble to make them take money. It seemed to them mean to sell food to a hungry man, or to take money for giving him shelter. The goodness of heart of the inhabitants of the retired mountain districts, away from the routes of tourists and the channels of traffic, has added greatly to the love and admiration I have for the Norwegian character.

It was with a feeling akin to sadness that I left Krokengaard, this pleasant home, where all had tried to make my stay agreeable. On the day of my departure the flag had been hoisted on the pole as a sign for the steamer to stop. As we sat at dinner around that cheerful family table, at the close of the repast the venerable host seemed suddenly to become particularly grave. He proposed my health, wished me success in all my undertakings, and expressed the hope that I had found Norway a good country, and the Norwegians a good people. "Our land is poor," he said; "but we cannot change what God has made. We wish you success and health in your further travels. When you come again to Sogne fjord, come to Krokengaard; you shall always be welcomed. Do not delay too long," he added, with a thoughtful face, "for if you do, you may find one missing." The faces of the company grew sad as he spoke, and tears gathered in the eyes of many.

"Yes," said he, "if you want to see me, do not stay too long, for I am an old man; the journey of my life is drawing towards its end. A happy journey to you, and welcome back to Krokengaard."

The parting touched me deeply, and I have never forgotten it; my thoughts often wander back over the sea, and wonder if the tall, erect form of the old captain, with his white flowing hair, still walks by the fjord at Krokengaard.

CHAPTER XXIII.

THE AARDAL FJORD.

The Aardal Fjord.—Its Noble Entrance.—Wild Valleys of the Fjords.—Boats on the Lake.—Return from the Sæters.—A Weird Lake.—Moen Farm.—The Hjælledal foss and the Hagadal-foss.—The Hofdal Farm.—The Farm of Vetti.—The Mörk or Vetti-foss.—The Aurland Fjord.—The Nærö Fjord.—Grandeur of the Scenery.—Gudvangen.—The Nærödal.—Stalheim Cleft.—A Fine Landscape.—Vossevangen.—The Graven Fjord.

FROM the Lyster, returning to the main fjord, you enter the Aardal, a continuation of the Sogne, and its most eastern extremity. At its entrance rises the Bodlenakken, 2990 feet, and, on the opposite side, the Bœrmolnaase, 3860 feet, with still higher mountains beyond them.

The autumn days had come, and I was sailing on the fjord, when my boat remained stationary for awhile, for want of wind, abreast and about midway between these mountains; the scene presented was one of grandeur and beauty nowhere surpassed, and rarely equalled, even in Scandinavia.

Among the wild valleys, high up in the mountains, is Oferdal (Aarferdal); by the shore were some poor farms; nets were drying upon poles by the boat-houses, and groups of flaxen-haired children were playing together: these poor-looking places are almost always crowded with children. Little piles of cobble-stones showed that the people had tried to clear the land for cultivation. Aardalstangen is the last hamlet at the upper end of the fjord.

In these hamlets the houses are small, possess few comforts, and are not especially clean. The best house usually belongs to the merchant of the place, who—a native of some city or large hamlet—in the little store provides the inhabitants with many useful articles to eat and to wear; he occasionally in-

dulges in petty speculations in butter, cheese, and even cattle, which he sends by the steamer to the larger towns; his profits are small, and he is contented if, in the course of the year, he has cleared one or two hundred dollars. The house of the merchant is used as an inn, and there the stranger will find cleanliness and good fare. The merchant here, Jens Klingenberg, was not at home, but his good wife and son received me with great kindness—the more so that I had brought a letter of introduction from one of their friends.

These valleys of the fjords are exceedingly wild and rugged, only bridle-paths leading from farm to farm. To the lover of nature they offer peculiar charms, especially here, as one of them contains one of Norway's beautiful water-falls, the Vetti, also called Mörk-foss. The journey to and from this fall takes less than a day.

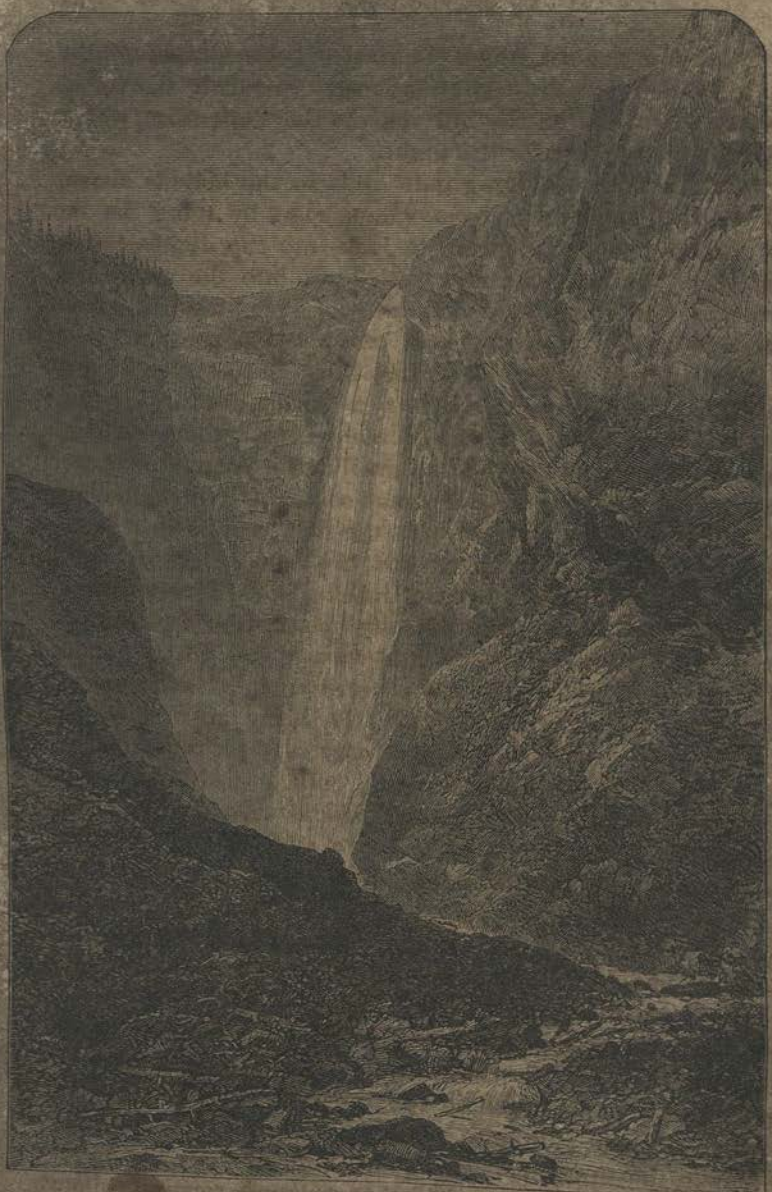
In this wild valley, which is a continuation of the fjord, at a short distance inland, is a picturesque lake, whose waters are of a deep-green color. Several large flat-boats, used to transport cattle to the paths leading to and from the sæters, lay stranded on the shore. The Stigebjerg mountain rises perpendicularly from the lake, a wild water-fall plunging in white foam from a towering height.

All was life on the lake; the flat-boats, loaded with cattle, sheep, and swine, were going in several directions. The summer was over. The maidens were delighted to leave their mountain retreats for home, and the villagers were going to bring them, with the cheese and butter they had made. Towards the middle of the lake the scenery is superb, and looks wild and weird. In one part the gigantic mass of rocks falls abruptly into the water, and a little farther on a grand fall —Hellegaard-foss—tumbles in white foam from the height above, and looks whiter on account of the sombre nature of the rocks. Perched high up are several sæters, one of which is called Kvenli. Soon after came in view from behind another white mass of foaming water, the Stige-foss, which had been hidden from our view.

Looking backward towards the fjord, a wild spectacle greets the eye, and one cannot realize or believe it is the same coun-

try just passed; towering mountains and wild ravines are seen in every direction, and the yellow leaves of the birch and grass look beautiful. Near the upper end, on its northern shore, is the Nondal valley, with farms perched 2000 feet above the water. At the head of the lake the valley of the Aardal takes the name of Utladal, which leads to the Vetti-foss. It runs almost parallel with the Lyster fjord, separated from it by masses of mountains about twenty-five miles wide, culminating in the Horunger, 7620 feet high, and surrounded by glaciers. On the eastern side the mountains rise to a height of 6500 feet, and its lakes and torrents afford the artist and the lover of mountain scenery unfailing and ever-changing sources of delight. A path from the Modal leads to File fjeld and to Nystuen, on the post-road from the head of the Lærdal fjord to Christiania.

There is a neat farm, called Moen, where one can find comfortable quarters. At a short distance from the house a spur of the mountain covered with fir seems almost to bar the way; but beyond this is a beautiful dale, with a few farms, looking like an emerald gem. This lovely spot is about one English mile in length. From there the valley narrows itself into almost a ravine, strewn with fragments rended from the mountain-sides, and lined with occasional terraces. Passing the farm of Svalheim you reach the Hjælledal-foss, a superb cascade, falling in a sheet of foam from a height of seven or eight hundred feet, and then the Hagadal-foss, nearly as high. The river below is spanned by a frail narrow bridge, composed of two or three fir logs; and on the other side there are a few fields of barley and a patch of potatoes. High up on the mountain is the Hofdal farm, approached by a dangerous path running at times over clefts spanned by a few logs, or along the smooth rocks, to which trees are fastened, to prevent people from slipping down to the ice in winter. Even in this lonely place, where the winds howl and the storms sweep with great force, there are some evidences of vegetation — hay enough to keep a few cows during winter, and birch-trees enough for fuel. The Utladal then becomes very narrow and almost obstructed by huge masses of rock, which fall every year from



THE VETTI, OR MÖRK-FOSS. From a Photograph.

the mountain, against which the torrent below dashes wildly, filling the valley with its constant roar. Suddenly the valley expands again, and on the hill you see the Vetti farm, where the tourist may tarry for the night.

From the house a zigzag path leads to the heights above, and to the deep chasm, from whose edge, by lying flat on the ground, one may venture to look into the depths below and follow the fall. Another path leads into the valley and to the foot of Vetti-foss, or Mörk-foss. This beautiful waterfall is formed by a stream from two small lakes at the base of the Koldedal plateau, 6510 feet high. From a dark perpendicular wall, forming almost a semicircle, the stream plunges down from a height of more than a thousand feet. Towards the end of summer, so small is the volume of water, that it falls gently in a transparent column of spray, looking the more white by contrast with the dark wall which forms the background. I wondered that this cloud of spray could make such a volume of water, rushing so violently among the rocks that it was with difficulty that I crossed to the opposite bank, from which a better view of the fall is obtained. The soil and rocks are covered with a dark fungus, everything contributing to make the spray appear whiter. I could see no land beyond, and only a few birch-trees on the ridge. As the fall is vertical, only a small portion of the water strikes upon the rocky walls. As I looked, the column of spray began to move to and fro, as the rising breeze swept around the walls, until it swung like the pendulum of a clock over a space of 250 feet; then came a strong gust of wind, and the whole mass spread into a transparent sheet of spray from top to bottom; as it became still it contracted once more into a white column. For a long time I stood watching this fascinating spectacle, and could hardly tear myself away. It resembles, in this changing column of spray, the Staubbach fall, in the valley of Lauterbrunnen, in Switzerland, and still more, according to descriptions and photographs, the upper portion of the Yosemite fall, in the famous valley in California. This latter plunges vertically about 1000 feet over a granite precipice, varying much in appear-

ance, according to the volume of water in different seasons, and its column of spray, in the same manner, is the delicate plaything of the winds. But the Mörk-foss has more water, and the photograph illustrates its smallest volume during the year. These bridal-veil water-falls are counted by hundreds in Norway.

THE AURLAND.

On the southern shore of the Sogne, some ten miles west from Lærdalsören, you come to the grand fjord of the Aurland. The depth of the sea at its entrance is over 3000 feet, and its breadth less than half a mile; the approaches are superb. The huge mountains rising from the deep sea, ravines, crags, precipices, and forests, combine to make a scene rarely equalled. On the western shore is the glacier of Fresvik, from the base of which several picturesque dales branch off in different directions.

After a sail of eight miles the Aurland divides into two forks, one of which is called the Nærö fjord; but we will follow the first. There is a farm called Stege, perched so high up that one wonders how the people can reach it from the fjord; on the opposite shore is Nedberge, and on the Kappadal one or two other farms; the buildings are so distant that one can hardly distinguish them, with their earthen roofs, from the rocks around. The valley of Underdal is on one side, near Flenje Eggen; and on the other is Steganaase. Eastward of the valley of Skjærdal rises Blaaskavl, 5650 feet above the sea.

The hamlet of Aurland has some painted houses and a comfortable inn. Four or five miles farther the end of the fjord is reached, ending in a narrow valley, where there are a few farms.

A rocky mass of about six miles divides the Aurland from the Nærö fjord, culminating in Steganaase, 5500 feet high. The view at the opening of these two fjords is magnificent, and the sea is here 1490 feet deep. As you lose sight of the Aurland fjord, and enter the Nærö, at every curve of land a new prospect greets the eyes, each equally grand and beautiful. The water is so transparent and still that, like a

THE NÆRODAL

mirror, it reflects all the objects by which it is surrounded—snowy peaks, silvery clouds, and sombre forests. Immense masses of gray granite, gabbro, and Labradorite rise from the sea-level to the highest peaks, and in the Nærö fjord the Labradorite partly rests on strata of gneiss visible along the shore. On our right the Hægde plunges down a thousand feet, in a series of cascades, white with foam, into the valley—the only grand water-fall I have seen on the Sogne fjord. The first time I entered the Nærö an exclamation of admiration burst involuntarily from my lips—I became spell-bound before the stupendous panorama; the sublimity of the weird scene impressed me with a feeling of awe and wonder—I could hardly realize that the water upon which we sailed was the sea.

When you arrive abreast of Dyrdal—carved out of the solid rock—the scenery is extremely grand; some small farms, whose dingy log-houses have withstood the blasts of centuries, relieve the dreariness of the scene. After passing Gjejteggen and the farm of Styve, the fjord suddenly contracts, and the depth of the water diminishes to 190 feet. After a few miles the navigation suddenly stops, and the Nærödal rises almost imperceptibly from the sea, winding its way among the same grand scenery as on the fjord itself.

I have sailed over this fjord at all seasons of the year—in bright sunshine, and when dark clouds swept by on the wings of a hurricane; but to me the beauty of the scenery was always greatest after sunset on a summer day, before the twilight had disappeared. Such an austere grandeur is given to these gigantic walls by the twilight, and their outlines look so like grim phantoms, that I doubt if there be anywhere a more weird and sombre sea-view than that of the narrow Nærö fjord.

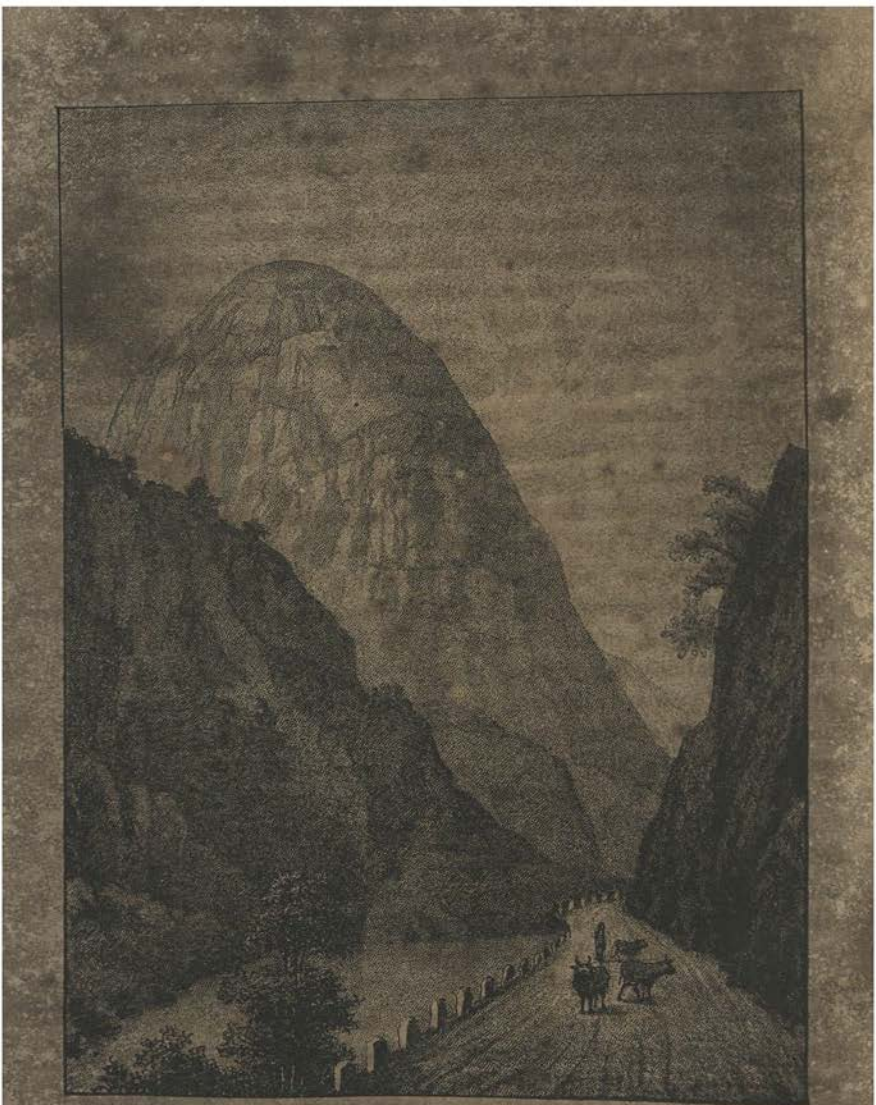
The entrance to the Nærödal valley forms a worthy continuation of the fjord. The hamlet of Gudvangen is situated among blocks of huge stones that have been torn from the mountain-sides; and it would seem as if any day an avalanche might overwhelm the dwellings of its unsuspecting inhabitants. On the other side is the lovely water-fall of the "Kilsfoss," 2000 feet high; at certain times of the year it is formed

of three distinct portions; at others, of two—occasionally of only one; the stream makes a leap of over 1000 feet, without touching the rocks, below which they join together.

The scenery is so gloomy at Gudvangen on a dark day that the most buoyant spirit is sobered, and even with sunshine one wishes to depart from its sad surroundings. Near the place is a small chapel overlooking the sea, reached by a narrow path; in several places the rock had to be blasted, and an iron railing protects the people from slipping on the ice and falling into the sea in the winter.

Marthinus Hansen, the station-master, was a quiet, thoroughly honest man; his wife, with her equally good face and white cap, looked like a matron of the olden time. A grown-up daughter, their only child, who had been sent to school in Bergen, helped in the duties of the household: although she could speak English, I could not make her talk. There were two servant-girls also, for travellers were numerous during the season. The little inn was all the fortune the family possessed, and it was quite comfortable; it is true the bedrooms were small, but Hansen said that as soon as he had accumulated money enough, he should add another story; "and then," said he, enthusiastically, "travellers will have large and comfortable rooms." He added, mournfully, "It is so hard to save money." His honesty forbade him to cheat or overcharge travellers. I have stopped several times with good old Hansen, and the more I knew of him the better I liked him. Now and then we write to each other, and in his last letter he wrote that many travellers had stopped at Gudvangen; I am sure they were all treated kindly and honestly.

From the Nærö fjord one of the most picturesque and best highways of Norway crosses to Eide, at the head of the Graven fjord on the Hardanger, a distance of about forty-eight miles. There is no other valley in Norway, through which a high-road passes, that can compare for weird scenery with the Nærödal, which suddenly comes to an end, and farther progress seems out of the question; an apparently impassable cleft bars the way, but the faint outlines of a zigzag road are seen in the distance, permitting the passage of this, the Stalheim cleft.



THE JORDALSNUT.

This work is one of the most remarkable instances of engineering skill displayed in Norway; the ascent is tedious, and in winter, when ice covers the ground, often dangerous, as I have myself experienced. Two charming water-falls are seen descending from a height of several hundred feet, dashed into spray on the rocks, and afterwards forming the Nærö River.

From Stalheim cleft the view of the Nærödal is very impressive. The Jordalsnut (*nut*—cone), an immense mass of granite, rises like a gigantic dome, looking down upon the narrow valley. From Stalheim southward the landscape is smiling and beautiful, and one seems glad to leave behind the gloomy Nærödal. Forest, charming lakes and streams, old farm-houses, and snow-clad mountains in the distance make a beautiful panorama.

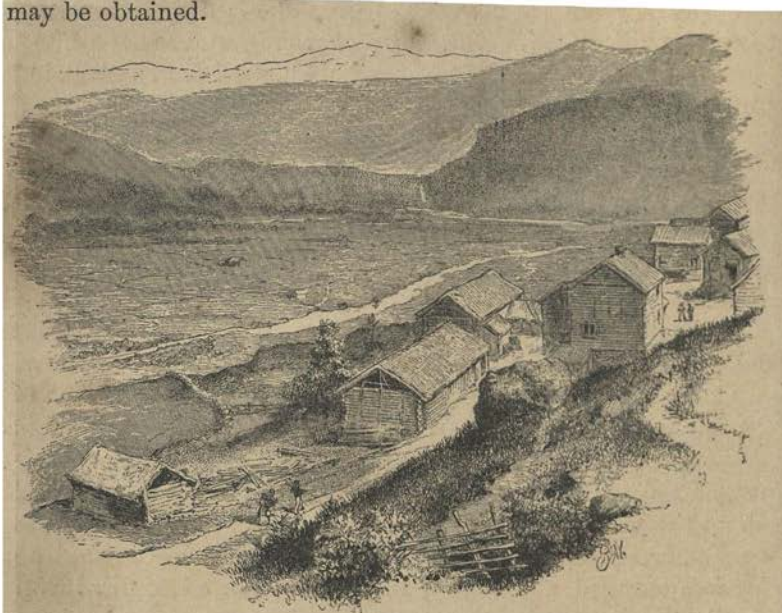
One year, on the summit of the cleft, I missed the face of an old professional beggar, the only one I had ever met in Norway. The first time I met him there, watching for strangers, I refused to give him anything; not dismayed, he talked about the weather and the fine summer, and then said he was very poor, asking once more for money. On my refusal he became enraged, and taking from his pouch a bag filled with small coin, shook it before me, saying, "Everybody has not been so mean as you are; look at the money that has been given to me! Look at it! look at it!" I burst out laughing, and this seemed to vex the old miser still more. When I inquired of the postman about him, he said the old fellow was dead.

Near the hamlet of Vinje is the quaint old log church built two centuries ago; the roof is domed and studded with stars, and the walls gaudily painted; two crosses, one of iron and the other of wood, were the only monuments in the graveyard; worship is no longer held in the building.

There are few districts in Norway near a high-road where the people seem so untidy as here; most of the houses are very dirty; while travelling in winter, on entering a house I have seen children of ten and twelve years of age stark naked, who at the sight of the stranger hid behind the stove or ran away.

The stations between Gudvangen and Vossevangen are

wretched, and food palatable to an inhabitant of a city cannot be procured, but good coffee, and sometimes bacon and fish, may be obtained.



VINJE.

On the road near the old farm of Tvinde, a wretched post-station, you see the Tvindefoss, which pours over a sparsely wooded ledge three or four hundred feet in height; and its cascades, if not grand, are among the loveliest in Norway. About six miles farther, passing through a picturesque country, the hamlet of Vossevangen, on the shores of a small lake, is reached; here the road branches off towards Evanger and Bolstadören, at the head of the crooked fjord of that name. The inhabitants of the parish of Vosse are very interesting, and a stay there over Sunday will repay any one for the delay. The accommodations at Fleischer's hotel were very good; the landlord spoke English, and the place was comfortable, and is the only one where travellers can remain overnight on their way to the Hardanger, a fjord which no visitor to the country should fail to see.

THE TVINDEFOSS.

Not very far from Vossevangen, among the hills situated between or overlooking the Rundal and Lione lakes, are farms which are reached by a steep ascent from the valley below. There the stranger can study the primitive character of the kind-hearted and intelligent people of Vosse. Their women weave a thick woollen coverlet, called *aaklæder*, which for centuries has had a great reputation among the farmers, who like the bright colors of their patterns.

At the farms of Graue and Norheim I was treated royally by the old folks, as their children living in the West, in America, were good friends of mine, and one of the grandchildren of the good farmer of Norheim had been named after me. The best things from the larder were always cooked for me, and there was no end of skål, Paul. At each of these two farms the daughters and other members of the family—as it is the custom in Norway—had huge chests up-stairs, where they stored some of their wearing apparel and other precious things. There each had her own bottle of wine carefully stored, and which is only opened on special occasions, when they wish to compliment some very good friends. Every one insisted on treating me. The brothers made me come to their houses and partake of their cheer.

From Vossevangen the highway to the Graven fjord, a distance of about twenty miles, passes through a picturesque country abounding in fir-trees; there are a few old-fashioned saw-mills, but the population is scanty. After a drive of ten or twelve miles the upper valley abruptly terminates, and a magnificent view bursts upon the sight; the lower valley, several hundred feet beneath, is hemmed in by high mountains; a superb piece of road engineering winds down the cliff, at times passing at the base of an immense overhanging wall of rock. On the left was a chasm forming the centre of this semicircle, and a charming water-fall—the Skafledal—tumbled down the face of the cliff, running thence over the bare rock, and then falling again to a greater depth. Crossing the bridge over the stream, where the road was guarded by blocks of stone, we continued our route, skirting along the Graven lake and the river, until I reached the fjord.

CHAPTER XXIV.

THE SMILING HARDANGER.

The Hardanger Fjord.—Its Beautiful Landscapes.—Melderskin.—Rosendal.—Autumn Wind-storms.—Sunday on the Fjord.—Dressing the Bride.—Bride and Bridegroom on the Way to Church.—Ulvik.—Holding Court.—Lione Farm.—Lars's Friendly Welcome.—The Eidfjord.—A Gale.—Marvellous Phosphorescent Water.—Vik.—Journey to Vöringfoss.—A Superb Sight.—The Sör Fjord.—The Loveliest of Norway's Fjords.—The Tyssedalfoss.—The Ringedal Lake.—Deep-blue Water.—The Skjæggedal or Ringedalfoss.—Norway.—Beautiful Water-fall.

HARDANGER Fjord presents a great contrast to the weird grandeur of the Sogne, with its water-falls and cascades plunging down the mountain-sides; at the foot of the overhanging glaciers the hills are covered with woods of deciduous and coniferous trees, and orchards, presenting a richness of foliage rarely seen in other parts of the country. The cheerful landscape seems to have impressed its features on the inhabitants of the farms and hamlets on its shores.

This fjord is separated from the Sogne by ranges of mountains, with steep, short fjords between them. Steamers from Stavanger on the south, or Bergen on the north, make the round trip twice a week, the voyage taking three days.

The Norwegian coast, from a little below 59° northward, is literally cut everywhere by fjords, and skirted by a maze of islands, bewildering to any one looking at the Government survey maps. The outer fjord is known under the name of Bömmel fjord, and is formed by the main-land on one side and a series of islands on the other, which, by their position and number, make it completely land-locked for a distance of sixty miles. South of Bömmel island, at the entrance of the fjord, the sea is 720 feet deep; but it rapidly grows deeper, till, a few miles higher up, it varies from 1260 to 1120 feet; thence lessening to the islands of Huglen and Klosternæs to

A MOUNTAIN SCENE IN HARDANGER.

408 feet, it increases gradually to the southern part of the island of Tysnæs to 1614 feet; at the entrance to the inner fjord, known as Hardanger, it is 1470 feet; and its greatest depth, between the eastern shore of the island of Varals and the main-land, is 2140 feet.

From Bergen the steamer's route, between the island of Tysnæs and the main-land, is through a crooked and narrow channel, the scenery reminding me of the Hudson, near West Point. As the steamer winds along, in a north-east course, crossing to the other side, the panorama at the upper part is magnificent, with mountains looming up in every direction, their snowy tops glittering in the sunshine: the Folgefonn snow-fields and glaciers look down from a vast plateau, and the fjords seem creeping at its base.

After a sail of seven hours from Bergen you come to Rosendal, a charming spot, with the Melderskin rising 4550 feet, and a large tract of cultivated land at its base; opposite, on the eastern shore, is the Mauranger fjord, extending almost to the base of the mountain of Folgefonn. The yellow leaves showed the presence of autumn; and the red of the asp and mountain ash rivalled in beauty that of the American foliage at the same time of the year, contrasting finely with the dark hues of the evergreens. At this season the weather is very uncertain, and wind-storms suddenly sweep down the mountain gorges with much violence, to the great danger of mariners. On our way up from the Melderskin one of these squalls struck our steamer. The sight was superb, for the force of the wind was such that, as we ploughed the water, the spray sometimes dashed topmast high, and the whole of the fjord was enveloped in a thick mist.

From Rosendal the sail is beautiful. One of the most picturesque places is Östensö; the houses stand on the shores of a bay which has almost the shape of a horseshoe: near Östensö is Samleköllen, surrounded by forest-clad hills and rich meadows. Passing on the left Björlbergfos, with the high mountain of Oxen in the distance, the scenery is remarkably beautiful; the fjord then makes a sudden turn to the south-east, known under the name of Utne.

I left the steamer and took a boat, and, as I was carried slowly onward by a gentle wind, I might have fancied that I was in a fairy-land, so balmy was the air, so blue the sky, so silvery the clouds, so beautiful the landscape, with the mountains decked with snow and ice. I heard the bell of the church on a hill looking down upon the sea; saw boats from all directions crowded with people; maidens fair, in their picturesque costumes, prayer-book in hand; young men with manly faces, proud to row them; mothers, in the snowy head-caps worn only by the married; old men and women bent with years, and with sight dimmed by age, with their grand and great-grandchildren. As they passed by, some shouted, "Amerikaner, I have a son — I have a daughter in America. Do you know them? Oh, tell me, have you seen them?" One would say, "My son lives in Minnesota;" "My daughter is in Iowa," shouted another; a third, "I have three children in Wisconsin." On coming near, they seized my hand, holding it fast with a nervousness which told the intensity of their feelings. They forced me to say that I did not know them, or had not seen them; but the link of love was there, and they loved me, for their children had written that they had happy homes in my own land, and they were glad to see one who lived on the same soil. As we bade each other good-bye they would shout, "Amerikaner, come to our farm, you shall be welcome; we will show the portraits which our children have sent to us, and perhaps when you return you may go and see them, and tell them that you have seen the old folks at home; that we think of them every day, that we miss them, that we pray God to bless them." And all would give me a fond parting look.

Continuing my way, in the afternoon I met a bridal party crossing to the other shore, on their way from the church; the bride, with her silver crown, which made her look like a queen, and her garments of bright colors, was seated by the bridegroom: their boat was followed by many others, filled with those going to the marriage feast. Two men were playing on the violin, and in the intervals of the music a draught of the celebrated Hardanger home-made ale was passed around; then

DRESSING A BRIDE. SCENE IN HARDANGER.

the boats went on again, the music gradually dying away in the distance.

Nothing can illustrate better the different phases of Norwegian life than the paintings of Tidemand, for they are so true; and here I can do no better than to give the representation, by that artist, of the "bride being dressed in her wed-

ding-garb," with her mother giving the last touches to her toilet, while the grandmother is looking on, and her younger sister is holding the looking-glass. But the long flowing or plaited hair, after the wedding-day, will be cut short. She will give up the graceful cap for a white one, like that of her mother, for these are worn by married women. I am happy to say that often young women object to this old custom, and hope that it will soon be among the things of the past.

The other scene represents the bride and bridegroom on the porch of the church, ready to go—either to the boat which is waiting to bear them to the old homestead, or to the vehicle which is to take them there.

The next Sunday I saw another procession crossing the fjord, but now all was silent and solemn, for it was a funeral cortege carrying the dead to the church-yard. Such is life—yesterday a wedding, to-day a burial; in one household sorrow and tears, in the other joyous hopes of a bright future.

On another page are three girls that have been rowing in a boat; they have landed and hauled it on the shore; they are going to make a visit at one of the farms in sight, and have brought a little luggage with them; but, before going, they are giving the last touches to their toilets, for these Hardanger maidens are coquettish: one is quietly tying her apron; another is rearranging the hair of her companion in a becoming manner, and adjusting it around her forehead. They wear their best clothes; the snowy-white sleeves of their chemises contrast with their dark dresses. The shortness of their skirts shows their bright-colored stockings.

I entered the Gravedal valley, and afterwards crossed over the mountains to Ulvik to see the region between the two fjords, in the beginning of October, when the leaves were falling fast. Passing several farms, I reached the plateau; the tops of the highest hills were covered with snow, and ice appeared along the shores of the streams and the Vatne lake; the thermometer stood at 34°. The sæters were found deserted, and I descended to Ulvik. The women on the way were gathering the leaves of the asp-trees for the use of the cattle during the coming winter, for the hay crop had been short

BRIDE AND BRIDEGROOM LEAVING THE CHURCH.

on account of a dry season. Ulvik was crowded with strangers, for the court was in session. The court-house was near the inn, on the fjord, and was an unpretending log-house, containing a wooden table, and a few chairs and benches. Most of the cases were for debt, or for unpaid interest on mortgages.

After the adjournment of the court, the judge, the lawyers, the lensmand, and the strangers went to the inn for dinner. While rambling round I met a group of three maidens. They were strangers, and belonged to another part of the Hardanger fjord. I had hardly left them when I met a bonde driving a cart. I saluted him in Norwegian. "Good-day, stranger,"

FINISHING THEIR TOILETS.

was the answer; "where are you from?" "From America." "Oh!" said he, "I have a brother in America—I have relations in America." We kept talking. "How old are you?" said my inquisitive friend. "Are you a married man? How many sisters and brothers have you? Are your father and mother living? What is your business? Have you a farm? How much does a horse cost in America? What is the price of a good milking cow, a sheep, a goat, a pound of butter? How many sorts of cheese do you make? Have you any 'old cheese' (*gammel ost*)? What are you doing in Norway? Are you not

the son of a Norwegian? How is it that you can understand and speak Norwegian?" By the time I had answered all his questions we came to that part of the road where we were to part, when my inquisitive friend said, "Won't you come to my farm? You shall be welcome." "Yes," said I. "What is your name?" "Paul Du Chaillu." "Paul is a Norwegian name," said he; "you must be the son of a Norwegian, and have forgotten somewhat your mother-tongue." Then I followed him. As the road was very hilly, he wanted me to get into the cart, but I refused. It began to rain, and he insisted upon putting his coat over my shoulders. We kept ascending, passing several good farms, and by a foaming stream. The trees, though somewhat scarce, were scattered among the meadows, or were growing by the roadside; they had been pruned of their branches, which were used for fuel. My friend's farm was among the highest. When we reached the top of the hill my good-hearted companion stopped, and, pointing to a cluster of buildings, said, "There is Lione"—and soon after I reached his house. I was hardly seated before Lars took from a cupboard a bottle, and insisted on my taking a glass with him, and then went in quest of his wife, who soon came and welcomed me. We refreshed ourselves with a substantial meal of milk, cream, cheese, bread-and-butter, dried mutton, and sausage. While I was eating one of his brothers came in, but he would not sit at table with me; that was not etiquette, for the repast was prepared especially for the stranger. Two of his children were called; the eldest, Anne Maria, thirteen years old, had superb blonde hair, and a rosy complexion which the fairest of her sex might envy; Ingeborg, the younger, only seven years old, had hair almost white. "When you come next winter to see me you will have a fine room," he said, for he was adding an upper story; "you will come and see me again, will you not?" I answered that I would come and spend a day with him. "Five days," said Lars; "as long as you like—you will be welcome." Then we went to see his cows, which had lately been brought back from the sæter. Lars was a well-to-do farmer for that region, owning eight cows, a horse, and thirty sheep. His brother also owned seven cows, twenty-five sheep, and a

horse. We made brief visits to the neighbors, among whom my arrival had created a sensation. The day was advancing, and I had to bid good-bye to Lione. "Why!" said Lars, looking perfectly astounded, "are you not to sleep here?" "No," I replied; "I wish I could." Although the rain was falling heavily, he insisted upon going with me for a part of the way, and I had great difficulty in preventing him from putting his heavy coat over my shoulders; but I preferred being wet to being smothered. The wife, children, and neighbors assembled to see me off and bid me welcome back. Lars Danielson was a perfect specimen of a Norwegian bonde.

HARDANGER MAIDENS.

The following day the weather, which had been fine all the morning, became threatening in the afternoon, with black heavy clouds hanging over the mountain-tops. But my boat was ready, and the two boatmen were waiting for me; and in spite of the lowering skies, and against the advice of the judge, I left, to return in time for the steamer, for I wanted to see the Vöring-foss, one of Norway's finest water-falls. In the twilight the mountains which rose above the Osse fjord looked grand and fantastic, and their summits were now cov-

ered with snow. The end of this short fjord looked particularly weird, as the darkness, which was soon to overtake us, threw its shadows upon the peaks, the wild ravines, and crags. The wind had been gradually increasing, the forerunner of a storm: first a few drops, and then a drenching rain fell, accompanied by a high wind; the short and chopping sea tossed our boat about like a nutshell. I was kept busy bailing out the water which came in over the side; we were evidently in the midst of a great storm. Now and then we pulled by a sheltered spot, but squall after squall struck us, each one seemingly stronger than the preceding, requiring all our strength to resist it. After entering the Eid fjord the wind blew with such fury that we could make but little headway; the caps of the waves, as they broke, scattered a thousand sparkles, for the water was highly phosphorescent; the rain was very cold, for one thousand feet above us it was snowing. The night was exceedingly dark. Nothing is more deceptive at night than the distance of the mountains; even my men, with all their knowledge of the fjord, went close to the rocks two or three times, first noticing their mistake by the striking of the oars against the shore. We could hear, but not see the water-falls, except where they fell from the cliffs into the sea, bringing to the surface a large area of the same phosphorescent light. Towards midnight the weather changed: the wind went down, and the storm was over. We were now pulling very fast, when suddenly a marvellous sight appeared ahead — the water of the fjord seemed to be in a blaze; I had never seen in the tropics, nor in the wake of a ship, such a brilliant glow; the brightest part of the Milky Way appeared to have come down into the sea; we seemed to float in the midst of countless flickering stars. This beautiful spectacle was caused by the contact of the waters of the river Erdal with those of the fjord.

As we approached the termination of the fjord I watched two lights on the shore until one disappeared, and soon after the other, at another window, went out, showing that every one in the place had gone to rest. We landed at Vik, and a few minutes after were admitted to the inn. There were a few farms, among the most important of which were those of

Nesheim, Legereid, and Hereid; the terraces here were very high, the soil poor, and the farmers did not appear to be thrifty, nor were their houses clean. At about a mile from Vik is the Eid fjord lake, a wild sheet of dark-green water three miles in length, at both ends of which are farms. A mountain-path leads to Vöring-foss, after crossing a bridge, the path following the right bank of the stream. Only two poor farms were met on the way, Thveit and Haabo; a few patches of soil between the rocks yielded a scanty crop of potatoes and barley. The people were busy, for they had slaughtered a number of sheep, and were to preserve and dry the meat for winter use. A short distance beyond we saw the remains of the steep zigzag path leading to the top of the plateau, from which you obtain a view of Vöring-foss, and to the mountain farm Maurset, and to the sæters. After crossing two bridges we ascended over a newly-made road, built over the débris fallen from the mountains, at the expense of Turist-förening, the members of which have built roads and paths over points before inaccessible, and shelter-houses for mountain travellers, and who publish a valuable periodical every year. On the way one sees the letter "T," with the date of 1870, cut in a rock, showing when this road was finished by the society. This well-made path is about six feet wide, and leads to the end of the valley, and to the foot of Vöring-foss. From here a fine view of the water-fall can now be obtained, whereas formerly it could only be seen from the heights above. Everywhere are traces of the silent work of glaciers. The first water-fall plunged silver-like over the wall on the right bank of the stream, swaying to and fro in the wind like a gigantic bridal veil.

The booming sound of the great fall became louder and louder as we advanced, and after crossing a bridge we found ourselves at the foot of Vöring-foss. Its heavy body of water fell perpendicularly from a height of 700 feet, in a solid column; after passing through four rocky channels with tremendous force, three of the columns leap over without touching the rock, though you can follow them all, running distinctly side by side with unequal rapidity. The great current of air created by the fall caused the spray to shoot forward, curling

VÖRING-FOSS.

itself, and then, according to its violence, ascending gently to a height of 2000 feet. The body of water of Vöring-foss is greater than those of the Rjukand, the Mörk-foss, or the Skjæggedal-foss. On the other side of the Vöring a cascade of much greater height, the Fosseli, comes down into the valley from a height of 2000 feet.

THE SÖR FJORD.

This sheet of water, about twenty-five miles long, and varying in breadth from one mile to a few hundred yards, is incontestably the loveliest of the fjords of Norway, and is probably unsurpassed, for I doubt that any sheet of water can equal it for beauty. It runs nearly north and south, separated from the main fjord by a mountain range crowned by the snow-fields and glaciers of Folgefonn, and from above the water-fall plunges down a distance of between 2000 and 3000 feet.

I had changed my boat and crew at Utne, a thriving hamlet on the fjord, and, as the wind was light, had ample time to enjoy the beautiful panorama, restraining my boatmen, who were lazily reclining on the seats, from taking their oars to speed us on our way.

Eight shores were in view—those of Eid fjord, the Sör fjord, the Kinservik, a deep bay-like fjord, and the Utne. After entering the Sör fjord, promontory after promontory appeared in succession. I counted eight spurs on one side, and four on the other, at the same time, their outlines ever changing as we sailed along. The great glacier of Folgefonn towered above the autumn landscape, seeming often to come to the very edge of the mountain, and ready to fall in pieces over the precipice. The mountain slopes abruptly into the sea from a full height of 5000 feet. A row of high cones (*nuts*), Solnut, 4650 feet, Torsnut, 5060 feet, Veranut, Langgrönut, and the rest of the range form the supporting wall of the plateau towards the east. On the east side of the fjord the more recent strata of the blue quartz and clay slate lay over the primitive granite or gneiss. In the early morning everything was reflected in the still waters of the fjord in a most perfect manner—glaciers, mountains, rivulets, snow-patches, trees, farm-houses, even the

smallest rocks were seen, and, while looking at the water, we seemed to be travelling on the land.

Beyond Ullensvang the glacier was more distinctly seen, and often the ice-mountain sides became more abrupt, and approached nearer to the water. At the farm of Hofland the fields extend to the end of the promontory, and a beautiful cascade tumbles down from rock to rock. At Fresvik the mountains form a semicircle, with several water-falls on the western shore, and give a fine view of the glacier. As we approached Tyssedal the mountain supporting the glacier exhibited almost perpendicular cliffs, black and gray in color; some were smooth, and others rugged and torn. The Tyssedal River rushes down into the fjord, which soon after narrows itself more and more, the mountains looking dismal, and the terraces becoming very distinct. The hamlet of Odde is at the end of the fjord; but on the eastern shore, about four miles from Odde, near the right bank of the river, is a difficult bridle-path leading to Lake Ringedal, on whose shore is Norway's most beautiful water-fall, the Skjæggedal-foss.

At first the road led through a fir forest; the Tyssedal rushed on its downward course, dashing violently against the boulders in its bed. In one place the stream bent around a small, smooth, rocky islet, covering it so thinly that the effect was like that of myriads of particles of ice sparkling in the sun; on each side the water flowed furiously, its clouds of spray floating on the currents of air. Where there was no shade the heat was intense, for it was the month of July, and the sun's rays were reflected from the bare rocks.

The path became more difficult as we advanced; we had to cross broken masses of rocks, boulders, and sometimes smooth rounded domes of gneiss, which sloped so much that the way was almost dangerous; happily, the coarser and harder part of the rock had resisted decomposition, and its roughened surface prevented us from slipping down; in two or three places trees had been felled, and made fast at points where the incline was very steep, for if the traveller should lose his footing he would inevitably roll down to certain death.

The higher we ascended the finer became the view on the

THE TYSSEDAL FOSS.

other side of the fjord, the green opaque color of the sea contrasting with the foaming river; occasionally we had a glimpse of the immense plateau of snow and ice of the Folgefonn. Never during my travels in Norway did I see such superb water effects grouped together. Here the stream flowed in a solid, smooth, deep, crystal-like mass; farther down it struck against a rock, or rushed through a narrow chasm, and tumbled into a pool, a foaming, angry, white torrent at times, through the foam, the water appearing of the greenish colour of tourmaline, and where it was deep, of dark-blue, and when shallow, the pebbles were as of silver. The beauty of the stream was no doubt due, in great part, to the very long period of dry weather that year, to the rocky bed of the river, and to the extreme purity of the water in Lake Ringedal.

Having reached the highest point, we descended by a regular flight of steps, the path skirting a chasm several hundred feet deep; and, after two hours and a half, we came to the Tyssedal. The little valley was picturesque, with the bright sun of July shining upon it; but it must be dreary in the winter, when the winds from the mountain-tops sweep over the lake and the farms. We passed a magnificent cascade, which, at an angle of about 35°, fell from a height of several hundred feet, and then crossed two small bridges over the outlet of Ringedals Vand.

As I approached the water's edge I was struck by the peculiar appearance of the water, which was of a steel-blue color close to the shore, and a few feet from it of a darker blue. I had never seen, among the hundreds of lakes of Norway, anything approaching this deep shade of blue, which appeared almost black: the bluest of the tropical seas could not compare with the color of this lake, nor could the lakes of the Swiss Alps. In a basin of granite, it stands 1310 feet above the sea; but how many feet below, I had no means of ascertaining.

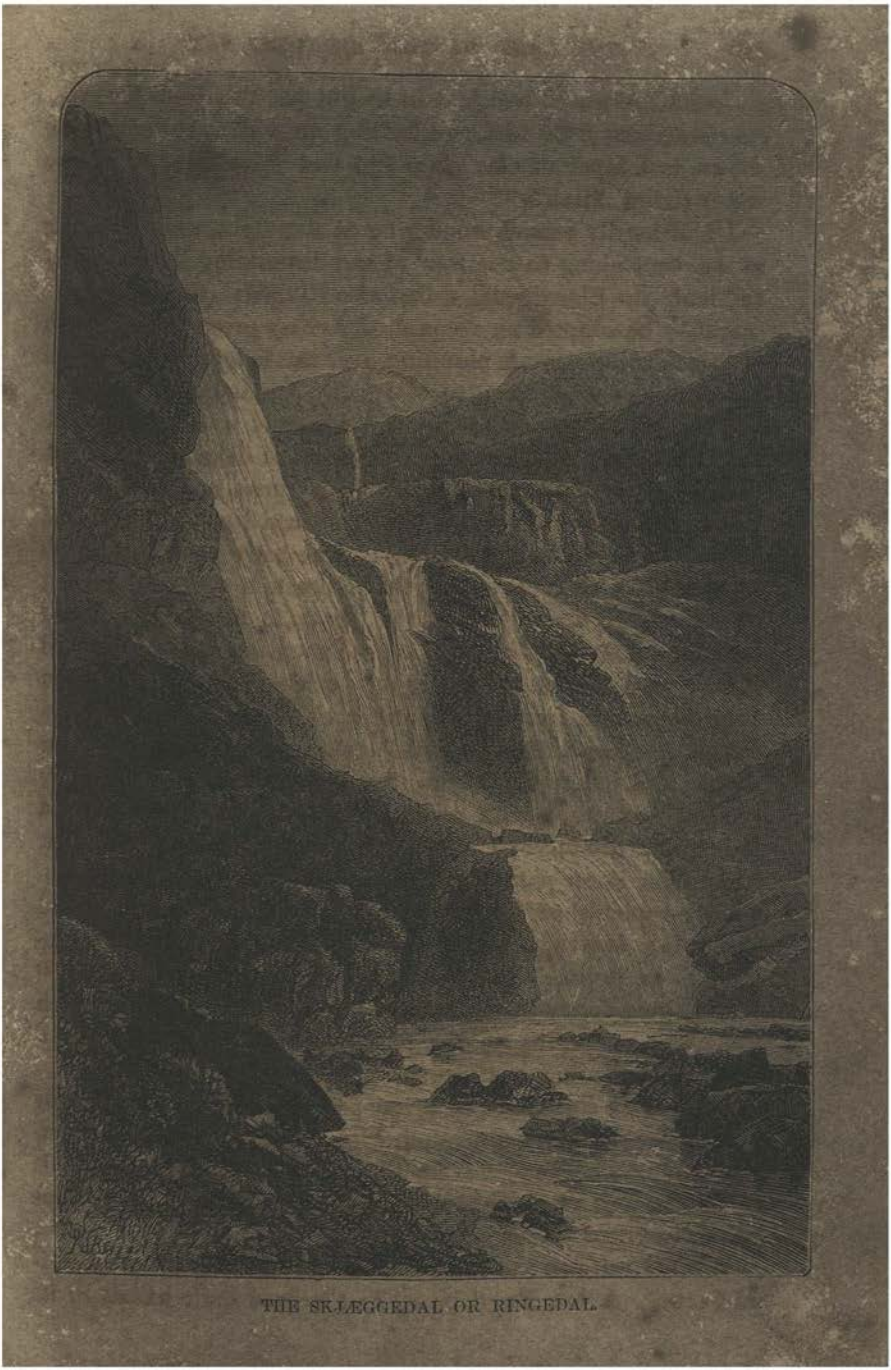
As we sailed along, the Tyssedal-foss burst upon our view, the two branches forming a triangle, uniting in a foaming mass below, after a fall from a height of about 1600 feet, sending up clouds of spray; the water was then lost to view, as it passed through a crooked channel down a deep chasm to form

a second fall about 500 feet in height; at this point the granite rises about 2300 feet, and, resting upon it, as the engraving shows, is a layer of clay slate 720 feet thick, over which the water throws itself.

I had hardly ceased wondering at the sight, while listening as we went along to the roar of the descending torrent, when suddenly the Skjæggedal, called also Ringedal (the latter name ought to be adopted on account of its easy pronunciation), with its white column, came plunging over the ledge into the chasm below in one grand leap of 800 feet. Immediately after taking this leap it struck a ledge of rocks, and was sent rebounding into a thousand foaming fragments of dazzling whiteness. The angry, turbulent, chaotic, and heavy mass, on its way downward, beat against another ledge, and formed a still thicker and heavier cloud of foam and spray. The body of water precipitated itself with such velocity as to create a powerful current of air, which caused the lighter spray to assume a hundred beautiful fantastic shapes. At one moment it was wreathed into a spiral column—water-spout—coiling and recoiling upon itself, bounding forward, coming back, mounting up, then descending — reascending again, breaking itself, assuming new shapes and indescribable transformations, and then suddenly pushed downward with great force, where it struck a third ledge, and disappeared in a compact and impenetrable mist, hiding the lower part of the fall. This vast white cloud, constantly replenished from the heights above, was sent forward skimming swiftly through the narrow gorge over the beautiful clear crystal stream, which, after flowing on some 200 yards, again formed a second fall of about 50 feet, from which the spray, ascending to the top of the hills, appeared like a thin vapor floating in the air.

I had seen hundreds of large and thousands of small falls in Norway; many were much higher, but none had ever impressed me with their beauty like the Ringedal; I gazed at it for hours, and new combinations and wonderful forms continually presented themselves.

When I returned to the farm the travellers' book was handed to me. A few Englishmen had written their names in it.



THE SKJÆGGEDAL OR RINGEDAL.

Two gentlemen from Boston had been here, and three American ladies, the only female strangers who had at that time visited the place, viz., Miss Williams, Miss Cutler, Miss Z. I. Cutler, Maine, U. S., July 6th, 1872. They hailed from the land of Pines. I felt very much like congratulating them, and in a fit of enthusiasm, for which the reader, I hope, will pardon me, for I am an admirer of plucky women, I shouted, "Hurrah for the girls of Maine!" A row of one hour on the fjord brought us to Odde; from which the tourist should not fail to visit the Buer-bræen, one of the glaciers of the Folgefonn.

At a short distance from Odde is the Sandven Vand, a lake said to be without fish, on account of the cold stream from the glacier. Not far from its lower end is the valley of Jordal, at the upper part of which is Buer-bræen. A path leading towards the end of this narrow dale is quite easy of ascent, the rise being very gradual, and the distance to the glacier about two miles. Four years before my first visit in the valley a vast amount of stone had fallen with a terrific roar, which in the distance sounded like thunder, sending its echoes from hill to hill. At every step there was something to notice, either while looking at the mountains, or watching the stream as it came plunging down. In one place the snow-fields of Folgefonn rest on a plateau forming a peninsula, bounded on the east by the Sör fjord, the Sandven lake, and the valley that follows; on the west and north by the Hardanger, and on the south partly by the Aakre fjord. On the east side, as we have seen, mountains fall abruptly. On the north and north-western sides they are lower, and not as abrupt or naked. On the south side, towards Aakre fjord, they are also lower, but in some places are very precipitous and bare. The Folgefonn is fringed by numerous glaciers. Among the most important on the north-west side is the Bondhus-bræen, which is much larger than the one we have just described.

The limits of perpetual snow vary, as I said before: in lat. 60° 3′, towards the east, 3440 feet; by Blaadalsholmene, 59° 55′ lat., towards the south-west, 3940 feet; by Gjerdesdal, 61° 8′ lat., towards the north-west, 2480 feet. The highest point of the snow-clad ridge is 5270 feet. Numerous little lakes are found

near the glaciers. A ridge of mountains crosses the Folgefonn in a north-westerly and south-easterly direction, forming the Svartdal (black dale) and the Blaadal (blue dale); and another ridge forms the Kvitnaadal. Blocks of stone mixed with sand showed their unmistakable origin. The glacier had reached this point years before, had retired, and was now again advancing; while higher up our path continued through a wood, in which numerous moss-covered stones could be seen, showing that the glacier had not reached that altitude for a very long time.

The view of that narrow glacier was imposing, impressing the mind with a sense of the great power of destruction possessed by a vast body of moving ice. In the study of other glaciers, which were retiring, we have seen how the boulders and smaller stones have been deposited in the fields in former times, and could trace, by the marks of the ice on the rocks, the course taken—but now, standing before the Buer-bræen, we could understand how valleys had been dug out of the solid rock by that most destructive form of water, the glacier. The huge, irresistible mass was still advancing slowly, and had done so for a long time. My guide said it had advanced more than fifty feet since the previous year, driving everything before it. All along the base of the ice was a transverse ridge of earth, in which fresh greensward and stones were mingled together, which the glacier pushed forward as it glided over the rocks. On the right was a huge mass of rock, which had been torn apart by the pressure of the advancing ice. The weight which had overcome this obstacle must have been enormous, for the evidence of such terrific force was before my eyes. Not even the solid mountain walls, composed of the hardest of our rocks, could arrest the forward march of the terrible glacier. This block of granite, torn from the mountain side, was about twenty feet long and fifteen broad. It had been broken unevenly, and was still covered with moss. A part of it was overlapped by the ice; and the upper stratum of the glacier, having a stronger current than the lower, would finally run over it and hide it from view as the onward march continued; and when the glacier again retired, the boulder

BUER-BRÆEN. From a Photograph.

would be deposited on some new resting-place. The glacier came down a steep gorge, leaping three distinct ledges of rock, and it was crowded between solid walls not more than 250 to 300 yards wide towards its end. The moraines seen higher up on each side above were engulfed farther down into deep crevasses formed by the pressure of the ice and ledges. On its left were towering mountains; Mount Reina being 5210 feet above the sea, and the second highest point of the Folgefonn. The ice was of a magnificent blue; the cavern was small, but extremely beautiful; and its stream was far from being as dirty as those of the glaciers of the Justedal. Lower down in the valley, not far from the glacier, was the Buer farm; and from the mountain-side came a cascade between 700 and 800 feet in height. The owner of the little farm was in great tribulation. He saw with much anxiety the steady advance of the ice, which had already destroyed some of his pasture-land at the head of the valley, and in a few years would probably sweep away the little wood which we had passed on our way up; then the farmer would be compelled to find new quarters, and perhaps be a ruined man. He had tried to sell his farm, but nobody was willing to buy it, fearing to cast away their money. It would not be strange, indeed, if in the course of forty or fifty years this glacier should reach the very shore of the Sandven lake, whence it could go no farther, for the ice would melt in the water; but glaciers are fickle, both in their forward and retrograde movements, and in a few years the Buer-bræen may retire instead of advancing.

CHAPTER XXV.

THE SÆTERS.

The Sæters.—Time of Departure for the Mountains.—Preparations before going to the Sæters.—Deserted Hamlets.—Departure from Stavanger.—Samson.—The Suledal Valley.—Reception at a Parsonage.—Samson's Farm.—The Suledal Lake.—Over the Mountains to Röldal.—The Valdal.—The Valdal Sæter.—A Hardanger Family.—Sæter Life.—Sunday.—The Father's Departure for the Farm.—High Mountains.—Red Snow.—Björn Vand Sæter.—Ambjör and Marthe.—Farewell to Björn Vand Sæter.

In the midst of the mountains, far away from the farms, by the shores of lonely lakes and rivers, or on the slopes of ridges beyond the limit of the growth of grain, are the sæters. These are mountain houses or huts, built of logs or of rough stones, where, during the summer months, the people of a farm come to pasture their cattle, for in the midst of this great wilderness of rocks there are many spots covered with aromatic grass, which gives a rich flavor to the milk of these places. Many of these sæters are very difficult of access; high mountain ranges and snow-patches have to be crossed, and rivers forded by man and beast. Solitary, indeed, is the life in these mountains, for only once or twice during the summer does the farmer go up there to see how those who have been left are getting on, to hear about the herds, and if the season has been good. Should the summer be cold or wet there is less milk obtained; it should be remembered that to many a farmer an abundance of butter and cheese is necessary, in order from their sale to obtain the supplies needed for household use. On these visits they bring provisions and take back the produce of the dairy. The sæter life is also a hard one; the pastures are far away from the huts, and during the whole day the maidens have to follow the herd, rain or shine, and return in the evening, cold, hungry, and often wet.

In some mountains pastures are very abundant, and sæters numerous; in others they are few and far apart. Almost every farmer possesses one, but some, who have more mountain land than they require, rent part of them to those less fortunate. Though the family owning a sæter may be very poor, and have only three or four cows, they show the same generous impulses which characterize the nation, and from them I always received as kindly a welcome as from their richer neighbors.

The people start for the sæter, in many districts, towards the middle of June, the time varying somewhat, but generally not after midsummer (St. Hans's Day), according to the distance and mountain heights that are to be crossed. They return between the middle and end of September, and, if high mountains are to be passed, about the first week in September.

Two young maidens, the pride of their family, or of a neighborhood, will remain in the mountains all alone, feeling as safe as in their father's home; they have no fear of being molested, for they trust to the honor and manhood of the bonde blood. Very few things in Norway have impressed me more than this simple faith.

The young lover comes once or twice to cheer the hours of his sweetheart, but only for a day: if engaged to him he is the more welcome, for in the autumn, after the labors of the harvest are over, the wedding will probably take place. Many a courtship has been commenced at these places, where the heart of the young maiden is more susceptible on account of the loneliness of her life.

A few days before the departure for the sæter a great stir takes place on the farm; milk-pails, churns, and wooden vessels, the great iron pot, the mould for the cheese, two or three plates, and a cup or two, a frying-pan, and, above all, the coffee-kettle, are made ready for packing. Salt for the cattle; flour, to be mixed with skim-milk, for the calves; bread, a piece of bacon for Sunday, coffee and sugar, and covering for the beds must not be forgotten. The girls take their Sunday clothes and prayer-books, and old garments for every-day wear; a good stock of spun wool, to make stockings, mittens,

or gloves in their leisure hours, and pieces of cloth upon which they can embroider. The old horse which carries the load is often let loose to pasture in the mountains for several weeks, for the ploughing is over, and the grass or hay left from the year before is carefully saved.

On the morning of departure the cows, sheep, goats, and a pig or two are watched by the children, to keep them from straying far away. If the farm is small, and the people poor, all the family go to the sæter till harvesting takes place. The mother is often seen carrying on her back the last baby. Before starting, the mother prepares an extra good meal for the farm-hands, or that part of the family who are to accompany the sæter girls—the daughters, or girls hired for the season. Those who take the lead often carry long horns, by whose shrill tones the animals are called to follow, salt being given to them now and then to coax them on, and the children keep them in line.

During the summer the farms and hamlets are deserted; sweet milk is not to be procured, except at the relay station, and the home-life is wanting. At that season I avoided the great routes crowded by sight-seeing tourists, and went into the mountains, each year exploring a different group; I always lived at the sæter, to which I will now lead the reader.

In the beginning of July I left the old city of Stavanger. The sail on the fjord was very interesting, on account of the sea-marks engraved on the rocky sides of Stensö by the sea, at a height of 150 to 175 feet; and at the narrow valley of Aardal four distinct terraces, one above the other, were in sight at one time.

After a trip of twelve hours we came to the end of Sands fjord, a branch of the Stavanger; here I landed with my guide, Samson Fiskekjön, who had been recommended to me as trusty and well acquainted with the mountains. Samson was a bachelor, about forty-five years of age, honest, though not brilliant, and of whom I still retain most pleasant recollections; he was chatty and amusing, and knew well the ways of city people from frequent visits to Stavanger. Samson was heir to a well-stocked farm that would be his at the death

GOING TO THE SÆTER

of his father, then eighty years old, and of which he was now the manager, and, to all intents and purposes, the owner; his mother was nearly as old as his father. Before arriving at his home he began to apologize for its simplicity, which he thought would not be agreeable to an American — all of whom he imagined to be millionnaires, living in the most luxurious style. He had heard of California, and of America as the land of gold, and, of course, everybody had gone and helped himself to the precious metal. So he commenced by saying that only the old folks were at home; that there was no milk, as the cattle had gone to the sæter; that the food would be too simple for me; that his mother would not know how to cook; that he was afraid there were many fleas; and finally suggested that we should drive to the parsonage. I mildly said that it would be better first to drive to his place, and then take a walk to the parsonage, and wait for an invitation from the pastor. After a drive of two hours through the picturesque valley of Suledal, along the clear river, we reached his farm, where we found his father splitting wood with a strength which augured well for a life of twenty years at least. The old couple received me with great kindness.

A number of farms were scattered about, and in sight was the church. A short walk brought me to the parsonage, where the pastor, a bachelor of about fifty-five, received me in a very cool and un-Norwegian manner, though there was nothing impolite in his demeanor. I was somewhat surprised at this unusual reception. All my efforts to get acquainted with him seemed useless; I gave him my card, but that, of course, did not help me, for he had never heard of my name, and had never seen any of my translated works: to my inquiry if he ever read the *Skilling Magazine* (which had from time to time given accounts of my journeying in Africa), his answer was, in a sonorous voice, "I never read the *Skilling Magazine!*" The hope of an invitation to the parsonage began to vanish, and visions of being tormented by fleas during the night came up before me; I had passed through that ordeal a few days before, and I did not care to experience another so soon; I knew that if Samson complained of them there must be a

prodigious number, for the people do not mind fifty or sixty of them in a bed.

I was about to retire, when another venerable clergyman, with his wife, on a visit from the North, entered the parlor. I commenced a conversation with him; but when I told him that in one summer I had crossed the land from the Baltic to North Cape, and from Bodö to Luleå, he flatly contradicted me, saying it could not be done—in short, the reverend gentleman gave me the lie. I came to the conclusion that these two worthies probably mistook me for some scamp, or an emigrant agent from America. If this were the case, I do not wonder that they did not receive me well, for such persons are not popular. There must have been some reason of the kind, for this was the only instance during my travels where I failed to receive a warm Norwegian welcome. When I told the story to Samson, on my return, he had a good laugh over it. I said, in a rather exulting tone, "Did I not tell you that it was better to go to the parsonage without luggage?" During my absence a complete metamorphosis had taken place in the farm-house, and everything was tidy and clean; bread, butter, cheese, and sour milk were on the table, and the good people excused themselves for having no sweet milk, as the cows were far away in the mountains. I slept with my door wide open, for the night was very warm; I do not think they slept at all, as coffee was ready for me at four in the morning: they pressed me to eat, as the journey before me was a long one.

I left with two boatmen, having besides a woman with an infant in her arms. We had not sailed far before we came abreast of a comfortable white-painted house, the pleasant home of a Storthingsmand, where we went ashore. The host was not at home, but his amiable wife, who had heard of my coming this way, had been expecting me, and seemed quite disappointed when she heard I had spent the night at the farm of Samson. Though I assured her that I had breakfasted, she insisted that I should partake of another.

The Suledal valley, near the lower extremity of the lake, is exceedingly interesting to the antiquarian, on account of the numerous tumuli or tombs of heathen times, some of which

are hollow, of circular shape, and surrounded by stones, while others are square. As we ascended the lake we could see the paths leading to the sæters, and patches of snow on the mountains. After a pull of fourteen miles we landed at Næs, on the right shore, near the upper extremity of the lake, from which there is a horse-path leading to the numerous sæters met between the Suledal and Röldal lakes.

The road over the mountains to Röldal is at first along a torrent spanned by a bridge; it passes numerous sæters, where milk was offered to us. Towards the close of the day the sun came out, gilding with its last rays the hills and snow-topped mountains, till night overtook us in the dark ravines, as we descended by a natural gigantic-like flight of stones to Botten, where we found only the daughter at home, her father and mother having gone to the sæter.

From Röldal a bridle-path leads to the Valdal valley, through wild scenery. I intended to pass the whole summer, or until the appearance of snow, in going from sæter to sæter over the table-lands of the Hardanger mountains. The beginning of August is the best time to cross the mountains, as then most of the snow has disappeared, the streams are shallow and easily forded, and the swamps are passable. I procured a good guide, who was to take his horse, not that I wanted to ride, but to carry our provisions: a horse is no trouble in this Röldal region; you can generally climb the hills faster than the pony does; but in difficult places a mountain horse, accustomed to go to the sæter, will be surer-footed than yourself, and make fewer slips on the stones; if riding him, you must not attempt to guide him, but let the bridle lie loose on his neck. The horses pick up their food as they go along, here and there in some green spot, and can endure great hardship, hunger, and cold. I carried a gun with me, not for protection, but for possible use in obtaining food.

The path, after leaving Röldal, ascended gradually along the Valdal River, in view, on the left bank, of the white column of the Risp-foss; descending again, and crossing the stream on a bridge, we saw, on the opposite shore, the bridle-path going to Lake Staa and upper Thelemarken.

On the right bank of the Valdal are seen many sæters, and paths branching in every direction. The river flows for some distance through a flat country dotted with fine pastures and small farms. Another stream throws itself into the Valdal, and forms a magnificent cascade of 1000 feet, below which the current was so strong that even the horse could hardly keep his footing while fording it. Twelve miles from Röldal we came in sight of the Valdal lake, the mountains sloping gently to the shore, near which were several sæters. Herds of cattle, which had come from the mountains to be milked, grazed on the green banks, and on our left, high up, was the Bakken sæter; while at the head of the lake the smoke curled upwards from the Valdal sæter, and we heard the loud cries of the girls calling the cattle that wended slowly on their way, browsing as they went. On the right bank of the lake a magnificent cataract fell from a very great height. We followed the shore till we came to the upper extremity of the lake. The people were watching us, wondering who we could be, for they expected no one from their home.

On our arrival they bade us enter the house, which was as comfortable as that of a farm, and the usual salutations took place; the milk was passed around in the large flat pail in which it is kept for the cream to rise; taking the customary sip, we handed it back, with thanks, and the usual pressing invitations to drink more (*dricke mer*) were responded to by drinking as much as we could, with many thanks (*mange tak*). When they learned that I was from America they looked at me with astonishment, saying, "Fra Amerika, fra Amerika." I was then made the more welcome, as Nels, the farmer, had a married daughter in the States. He had come the day before from the farm to carry back the butter and cheese that had been made; he lived far away, on the Sör fjord, one of the branches of the Hardanger. He was the father of a large family of grown-up children—a type of the Norseman (north man), hospitable but undemonstrative, with a tall and spare figure, and a kind face.

Three of the daughters were at the sæter for the summer, Synvor, Marthe, and Anne—all pictures of health, and blondes

of the type of the descendants of the fair-haired Vikings. Synvor, the eldest, rather short in stature, was nineteen years old; Anne was seventeen, tall, muscular, with piercing blue eyes, and fully able to take care of herself; she would have made a good model for a Valkyrie; Marthe was sixteen, with golden hair, soft blue eyes, and delicate complexion. All three were celebrated on the Hardanger for their beauty, and young farmers without number were trying to win their hearts. I could not but admire these northern girls, trained up in fresh air, simple food, with abundant exercise, and free from the trammels of fashionable dress.

In July and August I do not know of a more healthy climate than that of the sæters, especially when they are situated from three to four thousand feet above the level of the sea. The atmosphere at that elevation is most invigorating and beneficial, even to the Norwegians who live on the shores of the fjords or in the lower valleys. The air passing over the vast undulating and barren mountain plateau is peculiarly dry and exhilarating. Any person, a few days after his arrival, feels its effects; the appetite becomes good, and he who came ill often returns home with his health restored.

The mountain life is an active one, and the girls are busy from sunrise to twilight. The pastures belonging to this sæter were extensive in the neighboring mountains, and sufficed for fifty-two milch cows, with eight others, and four horses. The cattle belonged to three different farms, including that of Nels, some coming from Sör fjord, fifty miles distant; two of his daughters had charge of those not belonging to him, for which they were paid. The milk of each herd was put in the vessels belonging to the place from which the cows came, and the butter and cheese were set apart in like manner. The people are so honest that no farmer fears that the girls will favor one at the expense of the other, or put any of the butter or cheese in vessels belonging to any but the rightful owners.

A large enclosure, surrounded by a stone wall, contained a fine meadow, the grass of which was carefully cut and dried, to be taken away by sleighs in the winter. There were upwards of 250 milch cows at the Valdal sæters, besides large num-

bers of heifers, calves, and horses. The calves were kept at home; every morning and evening they were fed on a mixture of churned milk and flour, with salt; or, if no milk was to be had, on hot water, in which juniper shrubs had been kept for awhile.

At four o'clock in the morning we were awakened by the ringing of the bells which some of the cows wore around their necks; they had come by themselves from the mountains to be milked, and this was the signal for the girls to rise. This they did at once, and were soon on duty—each buckling on her waist a belt from which hung a horn filled with salt; this is given to the cows as well as to the horses and sheep, generally in the morning and evening, when they go to or from the mountains.

After the milking the girls drove the cows up another path in the mountains to new pastures, from which they would go and come by themselves after knowing the way. On their return the maidens went into the milk-room, the door of which was always carefully closed, skimmed off the cream which had been formed on the milk of previous days, and putting it in the churn, they began to make the butter. Others took the empty vessels to the river and rubbed them inside and outside with fine sand from the shore, and afterwards with juniper branches, finishing by a thorough rinsing in the stream. The pails are generally made of white pine, and are clean and spotless. Cheese-day also proves a busy time, and its work is done in the same thorough manner. The room where the milk is kept was marvellously neat; about 150 pails filled with it were on the shelves, each being about twenty inches in diameter and five inches deep, made of white pine, with wooden hoops; the milking pails stood on the floor ready to be used. Several barrels for the churned milk and buttermilk, and vessels for the butter, were also arranged in order.

On Sunday, after the morning milking, every one commenced his or her toilet as if getting ready to go to church, putting on clean linen, and all their holiday clothes and shoes. The girls and their mother wore dresses of thick dark-bluish woollen material—homespun—with corsages of the same color.

The bottom of the skirt was ornamented with a wide green band all round. The corsage was open, and showed a handkerchief embroidered with gold. Each girl wore a close-fitting little cap, which seemed to be made only to hide the ends of her thick luxuriant hair. No work was done except what was absolutely necessary; some of the family read the Bible and sang a few hymns of praise. After dinner visiting took place from sæter to sæter, and the afternoon was spent in the social fashion customary to the country.

I crossed the stream to visit friends from Röldal, who had their sæter on the other side—only a little stone hut. The fording was difficult, as the current was strong and the water deep. I had to ride; Anne was with me on the same horse, riding astride in front of me, like a man, I holding fast to her, as we had no saddle; the animal had evidently crossed many times as he made his way with great sagacity.

We had a fine time in the evening after the milking was over. One of the girls wanted to trip me "for fun," and in the attempt I lost a small locket from my watch-chain, and we could not find it, though we looked for it everywhere; it was a Christmas present from home, and I prized it very highly. The place was thoroughly searched the next morning, but in vain; the following year it was found, forwarded to Samson, who took it to Consul Rosenkilde, in Stavanger; he forwarded it to Christiania, from which city it was sent to my friend Herr Christian Börs, the much esteemed Swedish and Norwegian consul in New York, with the request to find me, and to deliver the article to me personally.

Early Monday morning everybody was up; the horses were ready for the return of Nels to the farm; the pack-saddles were put on over two thicknesses of woollen blanket; the butter, cheese, and milk for the working-people on the farm were not forgotten; the father in a quiet way, without kissing, said good-bye to all his family, and soon was lost to sight in the windings of the path beyond the lake.

The family would not let me start till I had taken a substantial breakfast, in eating which I almost incapacitated myself for the journey: my experience has taught me that a

traveller will do best, especially in the mountains, when his stomach is not oppressed with food. At last, as I was ready to say good-bye, Synvor suddenly disappeared, to return with a big cheese, which she placed in my arms. "Take that," said she, "and eat it on your journey, for you will sometimes be hungry; there are not many places in the mountains where you will meet a sæter."

Though I had no horse, and the cheese was heavy, I accepted it, not desiring to give offence. I shook hands with the family, and put a little money into the hand of Synvor, and a little gold dollar besides, but she exclaimed, "No, no!" "Yes, yes!" I replied. "When you come again to Odde, come to see us," they called out; "do not forget us—do not fail to come." "I will come," I shouted back, as I hurried away.

From Lake Valdal the path northward, over the mountains, is wild and dreary, even in the beginning large patches of snow having to be crossed.

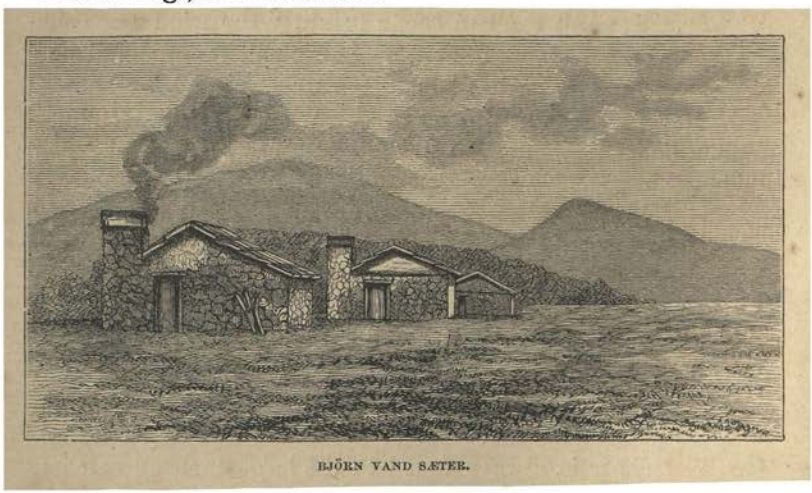
After leaving the lake, we ascended over a rugged country above the birch region, where juniper and arctic berries were abundant. An hour's walk brought us to the shores of the lakelet Visadal Vand, not far from which was an isolated poor-looking sæter, built of loose stones. The inside was far from clean; on one side were the beds, placed on the rough slab-floor; on the other, the fireplace; in a corner lay a heap of juniper bushes, five or six pails, a copper kettle for making cheese and boiling milk, a coffee-pot, and a churn. The occupant of the sæter and his wife welcomed me; the man was apparently more than eighty years of age, but hale and hearty; he had travelled about eighty miles to spend his summer here, and well exemplified the hardiness of these mountaineers. This sæter had one hundred and twenty dry cows, belonging to many farmers, who had sent them here to pasture. A hired woman and three men had the charge of them, having also five milch cows for their special use, besides their food. We skirted the hill-side of the Visadal, over bare rocks and patches of snow, passing many cascades and water-falls. Continuing our ascent—the horse went one way and we another—we climb-

ed a rugged hill, crossing several large snow-patches sometimes tunnelled by streams. Almost directly north was Haarteigen, 5390 feet high, dotted with snow, which shone in the rays of the sun; Nups Eggen stood on our left—the mica here resting on the primary rocks. There was no appearance of a path other than the dry beds of streams full in the spring. We passed the Steige Vand, a weird and lonely little lake at the top of the mountain: here even the dwarf birch had ceased to grow. Though the sun shone brightly the wind was cold, the thermometer standing at 48°. Large patches of snow came down to the edge of the lake, often overhanging the shores, and the gray lichen again appeared. We were still ascending, and our pass was more than 4000 feet above the sea. The fields of snow, which were deep and soft, increased in size, and we had to cross one, horse and all, almost one and a half miles long: now and then we saw the tracks of wild reindeer. Suddenly we found a tract of red snow in the midst of the white, the first I had ever seen. I imagined a reindeer had been killed there, and that the snow had been stained by its blood. "This is *gammel snö*" (old snow), said my guide. As we advanced these rose-colored patches became more numerous, some of them being fifteen feet long: the effect was very striking. This red snow is always found in the large melting patches, and its color is due chiefly to the presence of minute vegetable organisms, enclosing an oily-like red liquid, the algæ, known as *Hæmatococcus* (*protococcus*) *nivalis;* according to Ehrenberg there are also animalcules, which he calls *Philodina roseola.* We then passed on the border of Vasdals Eggen, where the mountains, largely covered with snow, range in the direction of north-north-west. After we had traversed this plateau for about three hours it sloped downward to the east, and a toilsome tramp through wet snow brought Lake Björne into view; on its shores I saw cattle grazing, and not far off the smoke curling from a solitary *pige sæter* (girl sæter) in this mountain home of the wild reindeer.

Every year, towards the latter part of June, from the Hardanger fjord or from Röldal, a farmer, accompanied by two girls, with a drove of milch cows, crosses these mountains.

During the summer the girls are left to take care of the cattle and attend to the dairy.

It was late in the day when we arrived at this lonely place; the girls came out to see who the strangers were, suddenly disappearing at our approach to put on their best clothes to receive us. They wore the costume of the girls at Röldal, and their caps were set very coquettishly on their heads; one had red stockings, the other blue.



BJÖRN VAND SÆTER.

Three small houses of rough stones stood near each other, the walls being about thirty inches in thickness, and the rear resting on a hillock of earth; the roofs were formed of large slabs, supported by planks placed lengthwise, wide apart, with beams across; upon these earth had been laid to prevent the admission of wind, and on this the grass was green; the floor was laid with large, uneven tiles of slate. The chimney, built outside, was covered at the top by a flat stone, to prevent the entrance of rain, and the door was made of heavy rough wood.

We were invited to enter, and I was struck by the extreme cleanliness and order of the room, the only ornament of which was a small looking-glass upon the wall; a single window, high up, twenty inches by fourteen, with four small panes, admitted light; near the fireplace, in the corner, was a frying-pan and

coffee-kettle; and a copper kettle, with the inside as bright as gold, partly filled with water, hung over the fire. On one side were shelves, upon which stood rows of pails filled with milk to furnish cream for the butter; in the middle of the room, on the floor, was a simple couch of hay, which was kept from spreading by pieces of wood; home-spun woollen blankets and sheepskins were used as coverings, for the nights are always cold in the mountains: behind hung the garments on a cord strung across. In one corner was a store of juniper and willow for fuel, used with great economy, for wood was very scarce.

Only once during the summer are the girls visited from the farm, for the road over the mountains is tiresome, and the distance ninety miles. Near to their house was another, which could have been used by another family, of about the same size, but with a much smaller window; in this the barrels of sour milk, and the cheese and butter were kept, and juniper bushes in large quantity; close by, much more roughly built, was the third building of the sæter. It must have been no easy work to erect these on such a spot, for the wood, the beams, the doors, the planks, had been brought from a long distance, and the collecting of the stone and the making of the walls was also a work of patience.

The girls were delighted with our visit, and, although they did not know us, they were not in the least afraid; Ambjör, the younger, was eighteen years of age, and Marthe about twenty-six; both were farmers' daughters—one living on Hardanger fjord, the other on the shores of the Röldal lake. Immediately after our arrival they began to prepare a meal for us; a small chest was converted into a table, on which a white towel served as a cloth; slices of bacon were fried, and cold potatoes (how good they tasted), the remains of their Sunday meal, with cheese, butter, and flat bread, were spread before us. A large pail of milk, with rich solid cream on top, was placed where we could help ourselves. When everything was ready, they said, "Be so good as to eat our simple sæter fare. You know we are not on our farm, and we cannot offer you a better meal." Everything tasted better to me than the

dishes of a banquet, for I was very hungry. Coffee was roasted, and freely served to us during the meal.

We had hardly ceased eating when the ringing of the cow-bells warned Ambjör and Marthe that milking-time had come. They dropped their fine skirts, replaced them by their working garb, filled their horns with salt, and, taking their pails, were soon busy with their twenty-two milch cows, which had come of their own accord from the pasture; the creatures got some salt, and rested for awhile on the ground around the huts. Samson, the guide, took my horse to a man sæter, some three miles distant, for it had been agreed that Paul must not stop there, it being dirty, uncomfortable, and infested with fleas.

When evening came, preparations were made for sleep. The girls moved the wooden barriers of the bed and spread out the dry grass, placing upon it the woollen blankets; we all went to bed with our clothes on, except that we took off our shoes and stockings, and Samson and I removed our coats: there was only that one bed for us all. Samson snored so loudly that there was no possibility of sleeping, and we voted him a nuisance, who ought to have gone to the man sæter: he kept us laughing all night. At four o'clock we were awakened by the bells of the cows, which called the girls to the milking.

The country surrounding the sæter was beautiful; on the other side of the lake was Sauerflot, a vast undulating plateau. The aspect of nature was severe, for there was no green to give color and variety to the landscape; the lakes lay hidden in the depth below, and the valleys through which coursed the tributary streams appeared from a distance like ravines, crawling, dark and snake-like, over those immense rocky plateaus. A grand view was that to the west, where the Vasdals Eggen and Nups Eggen ranges, 5530 feet high, rose into view; their peaks and some of the plateaus were covered with snow, and the ravines seemed filled with it.

I remained at Björn Vand sæter for a few days, while Samson went to another mountain home. I spent the time in hunting and roaming alone over the wild tract; Marthe and

Ambjör never ceased to wonder that I had crossed the great ocean. They took excellent care of me, though I could never eat or drink enough to satisfy them: before starting in the morning there was always a dispute about the provisions for the day, as they wished to load me with more than I wanted. When I was ready to start for the day's excursion, they would say, "Be careful to come before dark, for it would be very difficult for you to find your way at night;" and the last words I would hear were, "Velkommen til bage" (welcome back). Like all sæter girls, they were busy all day. When I returned in the evening I generally found them mending nets, which they were going to stretch across the mouth of a little stream emptying into the lake, in order to catch trout for my breakfast the next morning. These were fried in delicious butter.

On the 8th of August the weather suddenly changed in the evening, and the chilly north wind blew through the crevices of the hut. It was so cold on the higher mountains that the cows came to the sæter, which was lower, and where it was much milder; their bells awoke us. The girls went out to see what was the matter, and counted the cows, to see if any bears had disturbed them. In the morning the ground was covered with hoar-frost.

When the day of parting came a substantial breakfast was served, with two cups of coffee, for I had to drink an extra one. Marthe, who had noticed that I wore only thin cotton socks, insisted upon giving me the thick woollen stockings she made me wear on going to bed. Ambjör gave me a pair of thick gloves, and I had to take a cheese with me. They insisted upon accompanying me as far as the outlet of the lake, which I had forded every day in my rambles. We parted there, and as I got into the water I put a little money into their hands, and thanked them for their kindness, hospitality, and trust. "Don't forget to come and see us. Our fathers, and mothers, and families will be glad to see you. Happy journey, Paul, and God be with you," were the last words I heard. I have since been to their farms, and we have written to each other; but I have not heard from Marthe for some time; perhaps she is dead, or I am forgotten. Several times

I have been to Ambjör's farm, as it was more on my way. The last news I had was that she was married. That she may be happy, is the sincere wish of her friend Paul.

I close the chapter by giving to the reader the translation of a letter received from her, and another from my guide over the mountains:

HERR PAUL DU CHAILLU,—I received yesterday thy welcome letter of December 24th, with the enclosed present to me, for which accept my heartfelt thanks. I also saw by thy letter that thou art well, and that made me very glad; and I can also tell thee that I and my folks live in our usual health. I was afraid, when such a long time passed without news from thee, that thou hadst entirely forgotten me, until I got thy former letter of November 9th, for which I also heartily thank thee, as these letters and the enclosed present show the reverse; but thou wilt excuse my remissness in answering the first one.

I see by thy letters that thou intendest to come here next spring, and I assure thee that I look forward longingly to that time, and thou wilt allow me to ask thee to give me nearer information as to what time thou mayst be expected.

Thou art hereby most kindly greeted by thy affectionate friend,

AMBJÖR OLSDOTTER.

HERR PAUL DU CHAILLU,—Thou art sincerely reminded of Niels O. Overland, in Sönde, and for that reason I take the pen in my hand and inform thee about my health. I can never forget how much enjoyment we had when we were together at Haukelid sæteren, near Röldal. The little tin-pot thou gavest me I have preserved as a reminiscence of that time. Now I can tell thee the news that I was married, June 20th, 1875, to a sister of Ambjör, a little older than Ambjör, and who was not home the time thou wast there. She was servant to my parents in Sönde. Her name is Berte O——. Eight days ago I was with my father-in-law, Ole Vraalsen, and then I saw the present thou hadst sent to Ambjör, and read the letter. I read that thou intendest to visit Röldal next summer, and that thou hadst intended to come the past one, but hadst been prevented; and therefore we expect to see thee next summer, and I will then go to Röldal and talk with thee. In case thou thinkest of coming over Christiania, and shouldst want a guide on the road, I will meet thee there, and accompany thee to Röldal; but then thou must tell me what time thou wilt come. Ole Vraalsen's family asked me to send their hearty greetings; and, first and last, Ambjör sends many thanks for the present thou hast sent her, and will preserve it as a dear remembrance of thee. My *kone* (wife) wishes it was possible to see and speak to thee, as thou hast been so uncommonly kind (*snild*) to her sister Ambjör and her whole family. Ambjör feels very sorry that she did not return from Odde to Röldal, so that she could have gone with thee on an excursion to Bergen. I can also greet thee from Helge H. Rabbe, Niels H. Heggen, and lensmand U. H. Juvet, and all wish to meet thee when thou comest to Röldal. For this time I must end, with a dear and friendly greeting from me and my wife. Thou must write to me, and thereby do me a great favor. Respectfully, etc.,

NIELS O. OVERLAND.

CHAPTER XXVI.

Christiania.—Latitude of the City.—Characteristics of its Inhabitants.—Houses.—Mode of Living.—Kind-hearted and Hospitable People.—Delightful Homes.—Christiania Society.—A Kingly Repast.—Distinguished Guests.—Norwegian Writers.—The Royal Palace.—The University.—Public Buildings.—The Environs of the City.—The Christiania Fjord.—Oscar's Hall.—Frogner Sæter.—Sarabråten.—Departure from the City.

At the inner end of the long and charming Christiania fjord, at the foot of wooded hills, lies Christiania. It was late in the autumn when, for the first time, I entered the capital of Norway, and months after I had been in Scandinavia. I was tired from my summer rambles. The weather had been so rainy for the past few weeks that I was glad to come to a city for awhile. I found comfortable quarters at the Victoria, an excellent hotel, which is always crowded with tourists in summer, but was at that season of the year deserted by them.

The city is in latitude 59° 55′: 3° 58′ north of Edinburgh, and 1° 15′ farther north than Duncansby, the most northern point of Scotland, and has a population of 116,000 souls. It is a thriving place, rising in importance every day, being the seat of the Norwegian government. The King of Sweden and Norway is obliged, according to the constitution of the country, to reside here three months of the year.

As the stranger wanders through its broad streets he is struck by the steady, thoughtful demeanor of the inhabitants, which is but a reflection of the national character, and which reminded me in that respect of Göteborg, in Sweden. The city presents no striking features; the houses are stuccoed generally, not very high, and roofed with tiles, and the people reside chiefly on flats divided into apartments; but within a few years a large number of villas have been built, and in the new parts of the city are beautiful gardens surrounding many of the houses, and some of the private residences are very fine.

There is an appearance of thrift and comfort; order and good behaviour prevail everywhere. Along its quays vessels are continually loading or discharging their cargoes, and steamers leave at all hours of the day for the cities, the commercial marts along the coast, or for distant European seaports.

I often love to think of Christiania and of its kindly and hospitable inhabitants, of the frank and heartfelt Norwegian greetings I received from my friends. No kinsman of theirs from a foreign clime was ever more welcome each time I returned from my wanderings in their land. How pleasant are many of their homes, situated in some delightful spots within the radius of the city, and from which views of the fjords, mountains, or a charming rural landscape is obtained: they are surrounded by pleasure grounds, luxuriant trees, and beds of flowers. The well-to-do people are simple in their tastes, live comfortably, and are fond of home-life. The long winters are relieved by social amusements; skating, coasting, sleighing, dinner, dancing, and card parties, with musical entertainments, help to pass the dark days pleasantly.

Society is agreeable. The ladies, like their Swedish kinswomen, are well educated, proficient in the use of foreign languages, very attractive, amiable, and cultivate simplicity of dress — in a word, they are charming. The gentlemen are warm-hearted, polite, obliging, and there is a freedom and manliness in their bearing which always pleased me. It is only when admitted to their homes, not once but many times, and treated as a friend, that one can get an insight of the fine and noble qualities of the Norwegian character.

I met many educated men, and these were ever ready to serve me or give me all the information I wanted, making light of the trouble or inconvenience to which my request subjected them. One would send a work which he thought might be useful to me, another a map, or the government statistics, and so on, telling me where I should go either for scientific purposes or to study folk-liv (people-life), or to see some magnificent scenery, and whenever I started, letters to friends or relatives were handed to me, so that I might not be friendless. If a person knew of no one in the district where I was

going, he would go to an acquaintance and ask for an introduction for me. The day after my arrival I delivered the letters of introduction I had carefully preserved. These opened to me the doors of many houses, where I was at once welcomed, and received with great kindness. Friends were soon made, and during my stay of a fortnight I was taught to know what Christiania hospitality meant.

My first visit was to Consul Tho. Joh. Heftye, to whom I was indebted for many and various kindnesses, received from him even before we had met. The consul is an able financier, and has written several works on finance; a man of vast information and broad views, who, in spite of his large and extensive banking business, always finds time to be sociable with a friend. He is the president and one of five directors of the Turistförening (Tourist Society), whose object is to give to the people a taste for mountain exploration. Among the members are the king and the royal family. The consul is an indefatigable mountain climber and explorer, and in many mountain districts his name is a household word, for they love him for his genial kindness, his simple and unostentatious ways while among them, and often I have heard the bönder people say, when showing me his photograph, "Here is a man who is not proud." I am very much indebted to him for a great deal of personal kindness, warm friendship, and useful information. "You must dine with me to-morrow," said he, "and we will talk about what you want to do, and at the same time I will introduce you to some scientific and other gentlemen with whom I want you to become acquainted." If I had had any thought that a splendid entertainment could not be given in Christiania, it was soon to be dissipated. The large and handsome mansion of the consul is surrounded by acres of well-laid-out grounds, from which a beautiful view of the Christiania fjord is obtained. I ascended a flight of stairs in the midst of small forests of tropical plants and flowering shrubs, which reminded me of a warm climate. The effect of the lights was beautiful. I was ushered into one of the large drawing-rooms, and the host presented me to his charming wife, and then all round. A large company of

distinguished men had been invited: professors of the university, writers, journalists, scientific men, officers of the army and navy, foreign consuls, members of the Storthing, clergymen, etc. More than forty guests were seated before a sumptuous banquet. It was a kingly repast. After soup the glasses were filled, and the host, after looking around the table, said, "Velkommen til bordet" (Welcome to the board), this being the usual way of greeting the guests, among whom were some of Norway's most noted scientists. Such was my first introduction in the capital. The next entertainment was given to me by a distinguished manufacturer, Halvor Schou, also a man of great wealth, and much respected by his fellow-citizens.

Among the first to welcome me were the learned friends I had met before in the North, including Peter Christian Asbjörnsen, one of Norway's distinguished writers, whose name is a household word in the cottage of the mountaineer, in the fisherman's cabin, or in the home of the rich; for what Norwegian does not know his "Folke Eventyr," "Huldre Eventyr," and many other of his tales, where the old sayings of the people are so well told? Besides, he has written on education, forestry, and many other subjects. Few men in his country are more respected than he. But few persons have travelled over Norway more than he has done; his energy is wonderful, in spite of his sixty-two years and portly form. He has journeyed extensively over Europe, and now every year he travels thousands of miles over his native land. His kindness prompted him at once to see how he could be useful to me in my journeys through his country, and his letters proved of the greatest service. He is, in many respects, a perfect type of a Normand (Norwegian). Professor J. A. Friis, another fellow-traveller in Lapland, kindly gave me some of the photographs of that country to illustrate my works.

The public buildings are not remarkable for their architectural beauty. The palace, built on three sides of a square, is picturesquely situated, surrounded by pleasant grounds. The university building, which is massive, contains a fine library, a zoological and a geological museum. The collection of

northern antiquities is not extensive, but contains some very rare and valuable specimens, among which are gold and silver ornaments, worn by the former inhabitants in heathen times, and valuable coins. In the national picture galleries are some landscape paintings of great beauty, by Norwegian artists, some of whom have attained a world-wide celebrity.

The Storthing is a handsome building, facing Carl John Square, the finest square in Christiania. The pleasantest promenade is by the castle of Agerhuus, which defends the approach to Christiania: its ramparts have been laid in graceful and shaded walks. There are numbers of fine stores, and those of the silver-smiths are specially tempting, the stranger finding in them many beautiful objects, which he frequently buys to take home. Hotels are numerous, but as a rule expensive. The public schools and other institutions are a credit to the city. The environs are extensive and beautiful; the fjord is dotted with islands, and on its shores are villas, lovely woods, and smiling fields. Some of the drives lead to charming, wild, and secluded spots; the highways leading into the country pass through the midst of beautiful scenery. The Christiania fjord is about seventy miles long; but the stranger who only comes to Christiania does not get any conception of the grandeur of Norwegian fjords, and the same may be said of the scenery.

Oscar's Hall, the summer country-seat of the king, is at a short distance from the city: it is built on the shore of the fjord. The paintings of Tidemand here, illustrating the peasant life in Norway, are remarkable.

Frogner sæter, 1700 feet above the sea, belonging to Consul Heftye, is but a few miles from the city. From there a superb panorama of the fjord, extending all the way to the sea, may be enjoyed; and, looking in the opposite direction, the same extended view is obtained. The approaches to the place are through a large and dark forest, by a road built at a heavy cost to the owner. Sarabråten, situated in a wild region overlooking a picturesque lake, is a romantic spot, belonging also to the same owner, whose love of wild scenery has prompted him to build at these places houses like those constructed in olden times. The winter scenery at both places, with the trees

overloaded with snow and icicles, is perfectly lovely; and not the least among the pleasant reminiscences I have of Norway are the agreeable days I have spent at Frogner sæter and Sarabråten. There is direct railway communication with Stockholm and Trondhjem. The ways of exit from the city are numerous. In summer the many tourists generally prefer to travel by cariole. Comfortable steamers leave daily for different parts of the fjord and for Frederiksstad, near which is the fine water-fall Sarps-foss. Those who wish to make a longer voyage and see the coast scenery have to take steamers which go north to Bergen or North Cape.

CHAPTER XXVII.

The Island of Gotland.—Wisby.—Its former Commercial Importance.—Saga about the Island.—Relics of Ancient Times.—Memorial Stones.—The Former Inhabitants Vikings.—Fortifications and Ruins of Wisby.—Its Former Prosperity and Fall.—Old Coins.—Once Princely Merchants.—Churches.—Tenth, Eleventh, and Twelfth Centuries.—The Crypt of St. Göran (George).—St. Lars.—St. Nicholas.—Ruins.—Rambles on the Islands.—Numerous Churches.—A Fruitful Country.

ANOTHER winter had gone; the pleasant weather had returned; the sun was getting warmer every day, though the air was chilly; vegetation was more forward than the year before. The southern shores of Sweden, on the Baltic, were now clad in the mantle of spring; the birds and swallows had come back, and the warbling of the nightingale was already heard in the groves by the sea. The days were fast lengthening, the sun rising nearly at three o'clock, and the long twilights added much to the charm of the mornings and evenings.

On the 22d of May I was once more sailing on the Baltic; in the distance the soft outlines of an island rose above the sea—it was Gotland. Approaching its shore, the view became beautiful, the extensive line of coast being marked by yellow limestone cliffs, dotted with dark woods, thrifty farms, and windmills, while the ancient town of Wisby, with its ruined but massive walls, upon which the old dark towers stood like sentinels, seemed to watch over the place as in the days of old, and to frown upon the sea. The city rose in the form of an amphitheatre, and the white queer-shaped houses and the ruins of churches, partly hidden by groves of trees, made the place appear still more venerable in the bright sunshine.

Gotland, the largest island of the Baltic, is between 56° 55′ and 58° lat., lying almost in the midst of the sea, opposite the province of Courland, in Russia, and the Swedish province of Småland. It is nearest to the Swedish coast, with which it

runs parallel. This island was once a seat of great power, the chief emporium of the trade of Northern Europe, and in its day had no rivals. The time of its settlement is lost in the dimness of antiquity, and the only record we have of its most remarkable history is found in the "Gotlands lagarne," thought to be a supplement to the laws of the country. This saga is supposed to have been written about the year 1200, and is in the old Gotlandish language. Gotland, or Gutland, means the land of Gotarne or Gutarne (Gotmen), and these settlers were supposed to belong to the race which came from the Black Sea, overran Germany, and settled in the southern part of Sweden and in Norway.

"In the days of old," says the saga, "a fair and beautiful island, low and dim, floated on the sea by night, and the people beheld it as they sailed to and fro; but each morning, at sunrise, it disappeared beneath the waves, until the evening twilight had come again, when it would rise and float over the surface of the Östersjön (Baltic) as before. No one dared to land upon it, though the belief was general that it would become fixed if a fire was lighted there. Thjelvar, or Thjalfer, with his men, finally landed in a little bay of the floating island, and lighted a fire, and the island became stationary," and to this day there is a bay called Thjelvarvik, and a heap of stones near by is supposed to be Thjelvar's grave; but the time of his landing, and where he came from, the saga does not mention.

This saga also says that "afterwards the people so increased that the land could not feed them all; then they drew lots, and every third person was required to leave; but they refused, and fortified themselves at a place called Thorsburg, whence they were expelled. They afterwards went to Fårö, but were again driven away; they then went to Dagö, and built a city there, but were not there long before they were once more expelled; finally they went towards the river Düna, in Russia, travelling till they came to the Byzantine Empire, on the Black Sea."

The original inhabitants of Gotland were also heathens, and offered human sacrifices in holy groves on the hills, and these were enclosed. They believed in Thor and Odin, and many of the names of the farms and places to this day remind one

of the gods and goddesses of the Walhalla. The word thunder in the Gotland language is certainly meant for Thor (God of Thunder), who, when angry, struck terror into the hearts of the giants then dwelling in the North.

The island is one of the richest places of the North in relics of former times, especially the eastern shore, where there are numerous burial hills, or tumuli, remains of ship forms, called *slonkers*. Great numbers of antiquities discovered in the earth in many places show that piracy and commerce were the chief occupations of the inhabitants, who grew rich by plunder. But few relics of the stone and bronze ages are found, most of those thus far discovered belonging to the iron age. Among the most interesting remains are the memorial stones, standing erect and rough, with rude markings, some representing a Viking's boat, with mast and sails and high prow, with many men on deck, and above these others, all engaged in fighting; over these are figures of men and animals, so roughly done that it is difficult to recognize them.

One of the delights of the stranger travelling through the island is to meet everywhere these tokens of the past, dating either from the heathen times or from the earliest dawn of Christianity.

The tumuli, or the oldest graves, like those found opposite in Östergötland and in the southern part of Scandinavia, are very scarce in Gotland, there being only two. The great number of old graves here are made of small boulders thrown together in heaps, in the midst of which is an urn of clay containing ashes. By the side of the urn are often found charcoal and burned bones. There are very few unburned skeletons. The stone tumuli are often encircled by a single or double row of rounded stones. Small burial-places are made of four slabs, with an urn containing ashes. There are tablets with Runic characters, but the writing of most is so defaced that it cannot be read. The number of these inscribed stones already found is very great. They are found standing or prostrate, and were most probably memorials placed over graves. There are also memorial *crosses*, belonging to the Christian period, as late as the fourteenth and fifteenth centuries, also bearing Runic char-

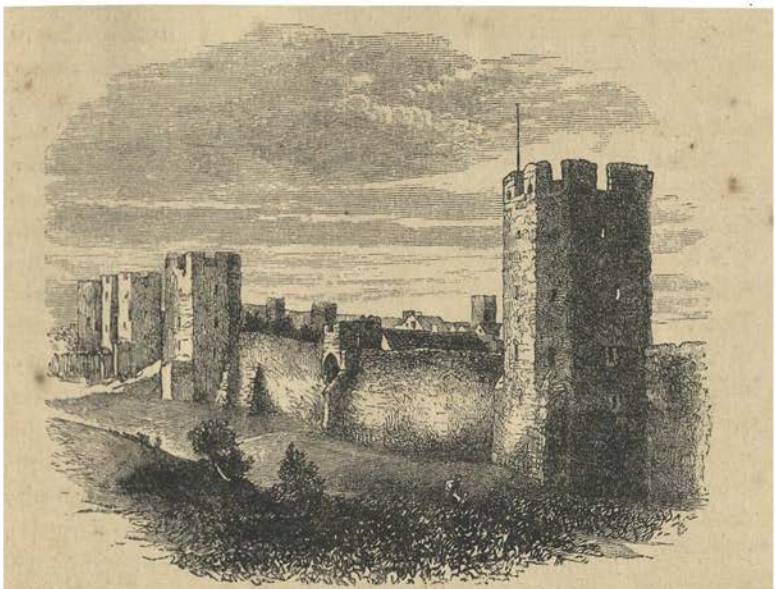
acters. One also sees many old fortifications, with a round wall of earth, or surrounded by rough stone walls.

There is no doubt that the inhabitants of the island, like those of Norway, Denmark, Sweden, and the eastern coast of the Baltic, once consisted principally of Vikings, who made long and dangerous expeditions, and every record left on the island points to the conclusion that all were of the same race. But as the Gotlanders became richer, they excited the envy of the piratical bands or neighboring chiefs inhabiting the shores of the Baltic, and thus became constantly involved in war.

There is always something very impressive in visiting old ruins. It is seldom that the merry sounds of mirth are heard by those wandering under the shadows of crumbling walls, or among the fallen pillars which have battled against centuries, and at last succumbed. They seem to sober the thoughts, and impress one with the littleness of man; one feels that those who built them, long since dead, were men of like nature with himself. It is not difficult for us to imagine the scenes of life of which they were once witnesses; but the silence which surrounds the spectator impresses him with reverence and sadness. The fortifications and the old churches of the town were built, to all appearance, of stone from the quarry upon which the city stands, and the whole aspect of the place, as one wanders through its streets, is strange. Here and there, among the more modern buildings and cottages, appears an old Hanseatic house, or an odd-looking warehouse, with crumbling walls, covered with ivy, and overhung by linden, walnut, mulberry, and elm trees. Picturesque ruins, dating back hundreds of years, and silent graveyards are mingled with the dwellings of the living, who here adorn the porches of their houses with tomb-stones, engraved with names, queer inscriptions, or fanciful carvings.

The period of the foundation of the city, as well as the settlement of the island, is uncertain; but, whatever may be its ancient history, in the tenth, eleventh, and twelfth centuries it rose to great commercial importance, and carried on a very extensive traffic. Traders came from England, Holland, Russia, France, and from the Mediterranean and other parts of

Europe. In the year 1237 King Henry III. of England allowed the people of Gotland to import or export goods without payment of duty. Some of its merchants were enormously wealthy, and they were found trading with Asia and different countries of Europe. All the merchants of the world were admitted within its walls. At that time the traffic from India, Persia, and other parts of Asia, came by the river Volga as far as Novgorod, and the trade increased as the wars in the East took place. The wealth of the people became fabulous, and the mania for building churches then commenced.



WALLS OF WISBY.

The city had an eventful career, and was subjected to many sieges and sackings. The walls now standing were built in the year 1288; thirty-six towers were erected by the inhabitants of the island, each *ting* (county or parish) building one. The walls are loop-holed, and two towers guard each gate. There are still visible the remains of the narrow slits through which the garrison could pour boiling oil, hot water, or molten lead upon the enemy. Besides these walls and towers three ditches

were built outside of the walls. There now remain twenty-eight towers, many of which are from sixty to seventy feet in height, and a few smaller ones between are yet standing.

The town once numbered over 12,000 burghers, and a great number of artisans lived outside the walls when the place became too small for their accommodation. The city was then independent, made its own money (of which many pieces are yet found), and raised its own military forces.

The island is especially rich in coins. In 1870, at Sindarve, in Hemsö, more than 1500 were found in one place, weighing over ten pounds — they were imperial coins from the western part of the Roman Empire, of standard silver—most of them dated in the last half of the first century after Christ. They were small and thick, with well-cut images of emperors and empresses, and were called *denarii*. Other coins are often found, much worn, showing long use before they were buried. In some places are found Roman gold coins, called *solidi;* these are never discovered in greater quantities than forty or fifty together, and are generally of the dates of the fourth and fifth centuries. A great many Kufic coins are also found, which came from Kufa, Bagdad, and also from Samarcand, Bokhara, and other Asiatic cities; these are generally large and round, without effigies, and covered with Arabic inscriptions on both sides; more than 10,000 of these have been discovered on the island; the oldest are from the sixth, and the newest from the tenth century. English coins, with badly executed faces of kings, from the ninth and tenth centuries, and great numbers of German pieces, and others bearing representations of bishops, cities, etc., are of the above period.

I procured a silver coin which a farmer had just ploughed up, bearing the image of the Roman Emperor Commodus, son of Marcus, who ascended the throne A.D. 180, and died A.D. 192. Valuable ornaments have been exhumed, consisting of rings, plain, twisted, or braided; simple rings for the neck or arms, made of silver or gold, and sometimes decorated with pearls; ornaments of bronze; shoe-buckles; figured belts and girdles; hair-pins; silver, and twisted bars of silver and gold, made to be cut up in pieces, and probably used as mediums

of value; beads of amber, and of glass, and clay of many colors; combs of ivory, and many other things.

Some of the seals of the once powerful guilds are still preserved, each inscribed with the name of a patron saint.

The city, in the height of its prosperity, possessed within its walls not less than fifteen churches and two convents; outside the walls, one church, and one convent for nuns; many of them were built by merchants of other countries residing in the town. During the eleventh and twelfth centuries more than one hundred churches were built on the island, most all of which now stand, and public worship is held in them; some are very beautiful in their architecture.

This remarkable city was several times besieged, its wealth provoking the envy of powerful neighbors. Notwithstanding its fortifications, Wisby was taken by storm, in the year 1361, by Waldemar III. of Denmark: the old treaty had long before become a dead letter, and Sweden could do nothing against the power of Denmark. The plunder was enormous, the gold and silver ornaments of the churches forming a great part of it. Waldemar entered the city through a breach at the southern

MEMORIAL CROSSES.

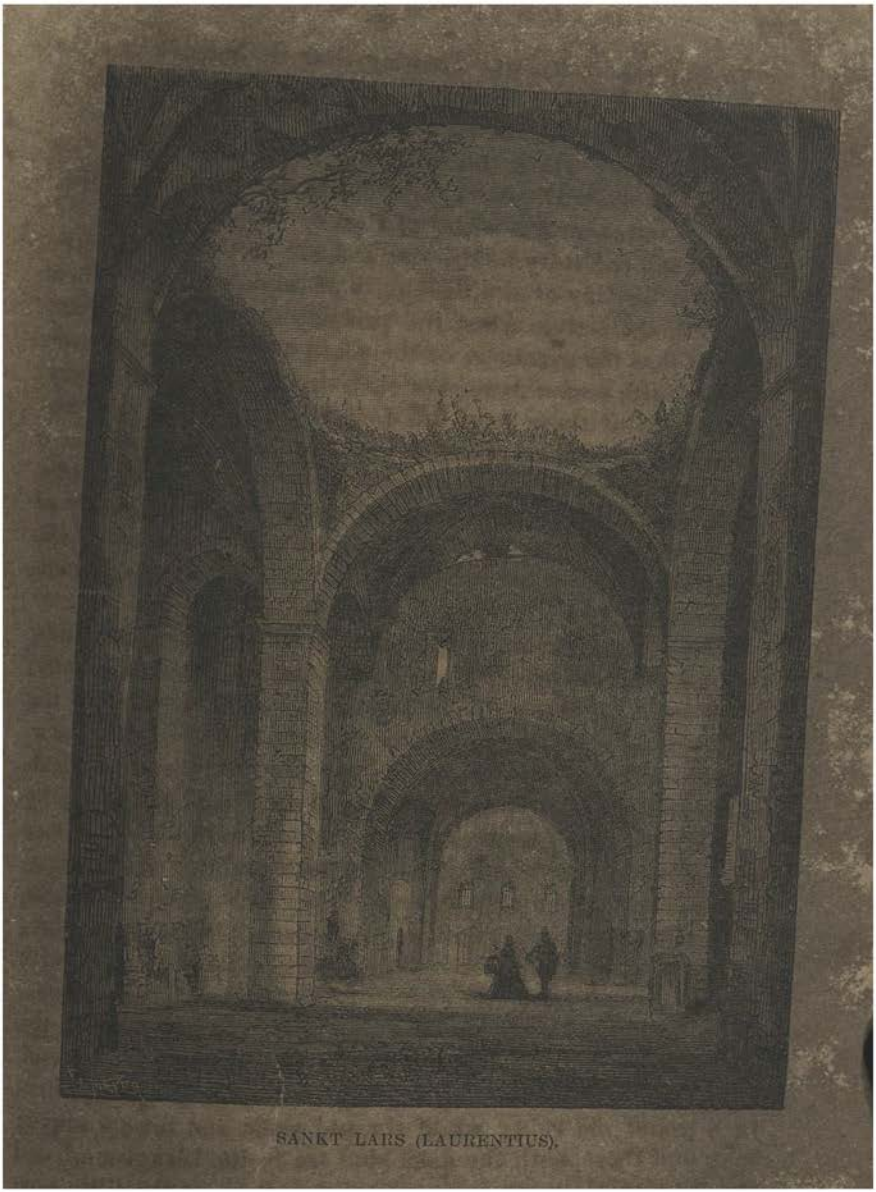
gate, near which now stands, as a solitary monument of the siege, a cross, put up to the memory of the slain, with a Latin inscription, still legible, of which the following is a translation:

"In the year 1361, the Tuesday after St. James's Day, the Gotlanders fell before the gates of Wisby by the hands of the Danes. They lie buried here. Pray for them."

But the booty which the victorious king carried away with him did not reach Denmark, the vessels conveying it foundering in a storm near the island of Carlsö.

Ruins tell the story of the rise and fall of the town, and remind one forcibly of the instability of human things. There was no doubt a time when the princely merchants of Wisby thought that the greatness of the place would endure forever, and its wealth accumulate—but such dreams have passed away. The people of those days are forgotten; they lie unknown under the tombstones or the sward of the church-yards, where they were buried hundreds of years ago. The silent mementos of the past have no tale to tell of the barter and festivity of former times; but the pages of history and the record of the crumbling ruins show that this was one of the most famous commercial cities of mediæval Europe.

Let us linger awhile in the midst of this strange town, now fragrant with the perfume of cherry, plum, and apple blossoms; let us walk by Hanseatic mansions and warehouses, once the residence of Danish governors, or owned by wealthy merchants—some still kept in good order, while others are neglected, appearing to mourn over the good times that are gone; by houses with rough steps and stoops floored with old slabs, once tombstones, upon which are engraved coats of arms, monograms, inscriptions with dates, scrolls; by humbler cottages, with windows green with creeping plants, shrubs, or flowers; by gardens, and old or crumbling walls, thickly covered with ivy, green and fresh, the growth of hundreds of years—sometimes falling in heavy, graceful festoons. We pass beneath the overhanging branches of the linden, elm, walnut, maple, mulberry, and other trees mingling together, coming now and then to a grand old ruin; while the old walls and towers appear here and there, with the deep-blue sea in the background, and the fishermen's boats stranded on the shore of the little port of Wisby. Sea-eagles are flying over the water, watching for their prey, and the shrill cries of the gulls are heard. Deep



SANKT LARS (LAURENTIUS).

caves have been cut in the face of the cliffs by the waves, which during the warm days of July are a favorite resort for those who are fond of marine views.

One of the finest ruins of the city is that of St. Katarina (St. Catherine), erected by the Franciscan monks about 1233, later rebuilt as a convent. The body of the church is an oblong square with twelve octagonal pillars standing in two rows, while the choir is pentagonal in shape. Originally the edifice was constructed in pure round-arch style, but has since been transformed into that of pointed arches. The roof is gone, and only these arches remain, which appear as if ready to fall. The grass is the only floor, most of the stone slabs having been taken away for door-steps and other purposes; but I noticed one upon which was chiselled the figure of a priest, and in his hand a chalice, on which was cut the date of 1380. Under the southern part of the church there is a small crypt.

From the top of the ruined church of Helge-Ands (Holy Ghost), built in the beginning of the thirteenth century, I obtained a fine view of several other ruins, and the outside of the church of St. Göran (George), which has a sort of crypt, above which is the main church; the lower part is 84 feet long by 47 wide, upheld by four pillars about 14 feet high; the windows and doors are rounded. The upper part is supported by four round pillars 10 feet high, and from this a flight of stairs leads to the roof; in the walls are several deep crevices, said to have been caused by an earthquake in 1540. Back of this church is the hospital of the parish.

Not far from Helge-Ands are the ruins of Sankt Lars (Laurentius) and Drotten (Holy Trinity), within twenty or thirty yards of each other. St. Lars was built in the shape of a Greek cross, and, like its neighbors, belongs to the middle of the twelfth century. There is another church of that style of architecture in Gotland. Inside it is 106 feet long by 76 wide. Along the outer wall is a gallery extending around three sides, approached by two flights of stairs on each side, and each gallery is separate; the arches are rounded. St. Lars is said to be nearly half a century older than Drotten. St. Maria, said to have been consecrated in the year 1225,

is the only church in Wisby where public worship is performed. It is 173 feet long by 75 wide, floored with ancient slabs of different periods, inscribed with monograms, Runic characters, Latin inscriptions, scrolls dating from the twelfth to the fifteenth century, in old Gotland, German, Dutch, and Danish.

HELGE-ANDS (HOLY GHOST) CHURCH.

This is the resting-place of many important personages connected with the history of Gotland, among them Philip Axelson Thott, Danish governor over the island at the time, who died in 1464. In front of the altar were three very fine specimens of these slabs, and it seemed a pity that continual wear should gradually efface their antique designs. In the churchyard were some gravestones, dating also from 1300 to 1400; some had been used several times, as appeared by the succession of dates. Near this church are seen the bones of a whale, which were believed, in former times, to be the remains of a

ST. NIKOLAUS (NICHOLAS) CHURCH

virgin giantess who had built the edifice. I asked Dr. L——, my informant, who was the wicked fellow who had dared to hint that those were the bones of a whale: "No other than Linnæus," said he. In the old chronicles it is related that a fish was caught near Wisby which screamed like a man, that all who heard and saw it marvelled, and that it was hung up in the church of St. Maria.

From St. Maria I went to St. Nikolaus (Nicholas), built about 1240, which is a beautiful ruin, and was the largest church in Wisby. It belonged to the Dominicans. It has a mixture of round and pointed arches; the inner width is 65 feet, and the length 199 feet; ten square pillars remain standing, two of which are damaged. The main building has twenty-two windows; on the west side are three, very gracefully pointed.

Among the churches, of which hardly any vestige is left, is St. Gertrude, built by the merchants of Holland, which lies one hundred paces south-east from St. Nikolaus; its length was about 65 feet, and 23 feet broad.

St. Hans is one of the oldest and largest in Wisby. It was the church in which the first Protestant minister preached, about 1525; hardly anything is left of it. St. Jakob and St. Mikel were entirely destroyed.

From ruin to ruin I rambled on, until all had been examined, and I finally found myself once more by the dark, gray, gloomy walls and towers, every one of which had a history of its own. The *ringmuren* (fortifications and walls), which encompassed the whole town, enclosed an area of 135 *tunnland* (about 170 acres).

Leaving Wisby by the old Norreport (north gate), flanked by two towers built to defend it, I found myself at once in the country. Roads crossed in every direction, so that one could travel wherever he pleased. A few of the farms appeared thrifty; but the majority of the population live in small houses, plastered over. The winter wheat and rye looked well, and the people were busy in the fields; many were planting potatoes. The country is fine in many districts. The houses were small, but clean and white, with steep slanting roofs, the win-

dows filled with potted plants, surrounded by gardens and orchards, smiling fields and meadows, and hop plantations, showing that the farmers were in good circumstances. The land here is divided among many persons, and each tries to make his small estate as productive as possible.

Now and then we would come to one of those graceful churches in which the island is so rich. There was something so quiet and restful about them that it almost made one feel as if, when the time should come, he would like to rest there. The lilacs in full bloom, the violets amidst the grass, the green fields and meadows, all added to the charm of the drive; several fine oaks grew by the roadside, and the plum, pear, cherry, and apple trees were in full bloom. The spring seemed to begin here at about the same time as in the neighborhood of New York city in ordinary years. The birch, oak, elm, ash, hazel-nut, poplar, mountain-ash, and aspen are found in many districts, and to the south the walnut and mulberry flourish.

The farmers were ploughing, and starlings followed in the furrows to pick up the worms. Many farm-houses were neat but small. Each farmer seemed to have a mark of his own; the agricultural implements and other articles being stamped differently. This old custom is called *Bo-märken*, and each family has inherited its distinguishing mark from its ancestors. Each parish has its own *Bo-märke*. Along the road, in several places, the limestone crops out above the soil; we passed forests of fir, pine, ash, with a few oaks, and encountered boulders and swamps from time to time. Several women were busy cutting potatoes, which were to be planted on the following day. The dwelling-houses in many places were built of limestone, roughly covered with mortar, and generally roofed with red tiles, but some were roofed with planks, and others were thatched. Little boxes were fastened to the trees in the yard for the use of the birds; everywhere we heard the thrushes singing, and skylarks filled the air with their notes.

The country near the sea is charming. The cliffs form a high ridge, and upon them are fine groves of pine and other trees; while the fresh green tints of spring lend additional beauty to the landscape. Walking along the beach, distinct

GARDE CHURCH, IN GOTLAND.

and unmistakable evidence of the slow rising of the land meets the eye everywhere; in some places, at a considerable distance from the shore, large and high pillars of limestone have been hewn out of the cliffs by the action of the sea, and they stand there as marks of the ancient shore against which the waves have beaten.

The architecture of many of the churches is very graceful, and that of Garde gives a fair idea of the style.

There is a special militia for defence, which cannot be called away from the island. Every man from the age of eighteen

to fifty has to drill six consecutive days every year; and afterwards belongs to the reserve till he is sixty. Heads of families, tenant-farmers, professional men, and a few others, are only called in case of pressing necessity. The commissioned officers are nominated by the king; the non-commissioned officers are chosen by the men.

The census of 1870 gave a population of 53,946 inhabitants, of whom 28,205 were female. The island, at that date, possessed 11,000 horses, 8500 oxen, 1000 bulls, 14,000 cows, 4800 heifers under two years, 38,000 sheep, 700 goats, and 5700 pigs. Cattle, sheep, and grain are exported.

The climate is milder even than that of the most southern part of the Swedish main-land, this being due to the influence of the sea. In this respect the island is like England, compared with the adjacent countries. The elms are very fine; mulberry and chestnut trees grow to a large size, and grapes thrive well in espaliers. The flora is very rich, comprising more than 960 varieties of plants.

The geology of the island is very interesting. In many places, after removing the soil, sometimes for thirty feet, you come to the limestone rock, which has been polished and striated by glaciers. The superincumbent earth has preserved the rock from the action of the weather, and it is as smooth as glass—so much so that it resembles enamel. In several instances the grooving is a foot deep. The general direction of these grooves is from north-east to south-west; the glaciers, no doubt, came from Finland.

From Högklint (High cliff), not far from Wisby, 150 feet above the sea, and the highest point on the island, we obtained a most extensive view of the country. The indented shores and cliffs to the north could be seen for a long distance. The Baltic was perfectly quiet, and its waters so clear that the eye could penetrate to a great depth, even close to the shore. Between the cliffs were old bays and sea-beaches, not more than thirty, forty, or fifty feet above the present level of the sea, while in the water, at some distance from the shore, we could see unmistakable traces of a submerged beach, which, if the island continues to rise, will again show itself above the

surface. There are places on the island where forty or fifty different tide-marks may be counted, lying one above the other on the beach, proving incontestably that the land has risen slowly in the course of ages. Could this have been the origin of the legend before described? Geology has demonstrated that there have been alternate risings and sinkings of land at different periods, in this region as elsewhere—a demonstration which leads the thoughtful to reflect upon the great progress of the different branches of science—yet the attempts to correct the erroneous ideas of former times have been, and are even now, received with vituperation and obloquy by those who foolishly fear from these discoveries the overthrow of religion. But as new facts are brought to light year after year, the more beautiful the world seems to us, and the more marvellous does the wisdom of the Great Creator appear to our feeble understanding. It is sad to think that the only reward of diligent investigators has often been scorn during their lives, and that good people, from false notions of what they believed to be right, have too often heaped abuse upon the devotees of science. Happily for the cause of truth, these are undismayed by what frequently appears a conflict in which they must be crushed; for, their statements of fact being unanswerable, the power of unreasoning fanaticism is brought to bear upon them. Every one knows that no true progress can be made in investigation without discussion; but vituperation is not argument, and denials without demonstration of facts do not throw any light on a subject in controversy. True students have no other aim than that of the enlargement of knowledge. They work hard, and think still harder—often spending sleepless nights, carried away by the intensity of their enthusiasm, and forgetting the rules of health, till at last they are sometimes left like wrecks stranded on the shore. What is their object? To gain riches? No; for it would have been better for them and their families if they had thought a little less of science and more of the world. To gain knowledge, and to impart that knowledge, has been their purpose, and is to this day the aim of the true scientist.

CHAPTER XXVIII.

Upsala.—The University.—The Nations.—The Library.—The Cathedral.—Old Upsala.—The Kings' Mounds.—Excitement in Town.—The Students.—Chorus-singing.—Serenading the Young Ladies.—Song.—Ceremony attending the Delivery of Degrees.—Diplomas.—The Banquet.—Bill of Fare.—The Ball.—Swedish Young Ladies.—Governor of the Province.—His Scotch Descent.—The Old Castle.—A Concert.—Dinner at the Castle.—A Nobleman's Charming Family.

Upsala is a town dear to Sweden, not only on account of its great antiquity, but because it has been for centuries its great seat of learning. Upsala is essentially a university town; it has a population of about 16,000; the river Fyrisån flows through it, and the streets are wide, and paved with cobblestones. The University dates from 1249, and its revival under Gustaf Adolf, from 1613. In order to be admitted, the student has to pass a successful examination at one of the *elementarskolor* (high school). Formerly the examination was held in Upsala. The medical course occupies from five to seven years, and that of philosophy and law from four to five years. No man in Sweden can be a clergyman, a lawyer, or a doctor unless he has graduated at Upsala or Lund, the two universities of Sweden. The Rector of the University, who is changed every year, is chosen from among the professors. The students are divided into nations, according to the provinces or *läns* to which they belong; each nation has a building or suite of rooms of its own, used as a place of meeting for the members, and a library—the young men lodging in different parts of the town. They lead the joyous life of the students of Germany, with this difference, that the custom of duelling is unknown.

As the visitor wanders amidst the tombs and along the shady and flowery walks of the beautifully kept cemetery, he sees a huge structure of granite, somewhat rough, but massive and

imposing, which belongs to the nations of the University, and marks the resting-places of students who have died in Upsala.

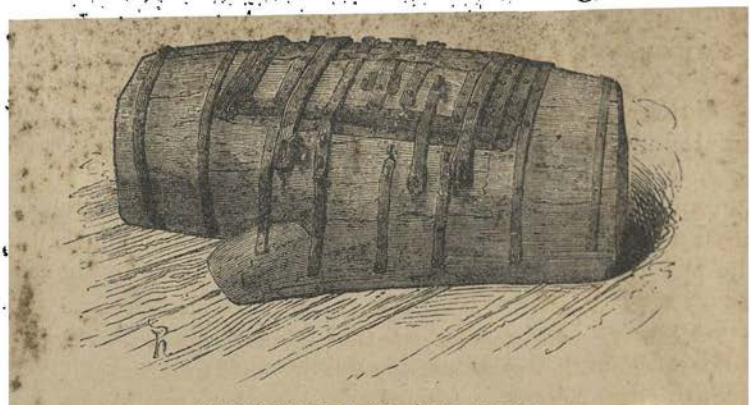
The great men who have come from Upsala are the witnesses to the well-earned celebrity of that institution, and many of its professors have a world-wide reputation. Among the interesting buildings is the Carolina Rediviva. The library of the University contains some 200,000 volumes and about 8000 manuscripts, some of which are exceedingly valuable. Biblical students will find in this collection a Bible with marginal notes by Luther and Melanchthon, the "Codex Argenteus," a copy of the Four Gospels written in letters of silver, and many other valuable and ancient books. The cathedral is well worth a visit, if only for the sake of standing before the tomb of Gustavus Vasa, who lies buried there by the side

THE KINGS' MOUNDS NEAR OLD UPSALA.

of his two queens. Many Swedish heroes and great men are also interred there.

At a short distance from the town is *old* Upsala. Not far from its church are three large mounds, called *Kungshögar* (King heights). There is another one, called *Tingshög* (Ting height), where, in heathen times, kings harangued the multitude. The old church is but a short distance away, and it was

here that the great temple for the worship of Thor, Odin, and Freya was established in Scandinavia. A sacred wood covered the country, and human sacrifices were made to the gods. Two of the tumuli have been examined, and in one the bones of a woman, in an urn, and those of a small dog, were found.



OFFERING SHRINE IN OLD UPSALA CHURCH.

Large numbers of tumuli are scattered around this venerable place of pagan worship. Old Upsala church is one of the most ancient in Sweden. It is built of stone, and possesses a queer offering shrine, wherein the pious in Catholic times deposited their gifts.

The university town, on my arrival, presented a very animated appearance; the people were dressed in their holiday attire. This unusual commotion was on account of the ceremonies attendant upon the award of degrees to students who had passed a successful examination. Hundreds of graduates thronged the streets; they were easily recognized by the regulation white cap, with a black velvet band, decorated with a small blue-and-yellow rosette in the centre, symbolic of the Swedish flag. The sidewalks were crowded by young ladies, who had come for the occasion, and it was evident that many persons would be unable to find accommodation. I was told that this would probably be the last of the triennial exhibitions, for the authorities had objected to them, as being too expensive for the students.

In the afternoon the students assembled to greet the Chancellor of the University, who had just arrived from Stockholm; they sung in chorus with such magnificent voices that I did not wonder that those they had sent to the Paris Exhibition had won the first prize. An immense crowd, from all grades of society, followed them to the house of the chancellor, where they sang a superb student's song and chorus with wonderful precision and perfect accord. They pride themselves upon their singing, and take great pains in rehearsing together. The song being ended, the chancellor appeared and made a brief speech; after which the students, instead of dispersing, continued to sing, walking through the streets until they came to the residence of one of their favorite professors, who that year, I think, was Rector of the University, and who had graduated fifty years before. The same crowd still followed them. They sang another chorus, and, after again walking through the streets for awhile, finally dispersed.

The first and the two following nights there was hardly any sleep for me. There were in my hotel, fortunately or unfortunately, some young ladies — the sisters, cousins, or sweethearts of students — and I did not get a wink of sleep until three o'clock in the morning. Students, in groups of four to eight, came in succession, and sang their beautiful melodies under the windows, in compliment to the fair ones. One band had hardly left when another took its place, and fine voices rang out melodiously in the silence of the night. There was no peace for the Swedish beauties; each had to place a lighted candle in her window, to show that she was awake and heard the serenade given in her honor. This old and pretty custom seemed to be enjoyed by the students, and the girls evidently liked it. The following are two specimens of the songs I heard:

SERENADING DUET.

SKYMNINGEN (THE TWILIGHT).

Hear how still the wind whispers,
The stream murmurs,
The song of the thrush enchants!
See, a silver sky

Breaks the color
Between the mountains
Of the sun, that away will flee.
Purity radiates from the azure,
Love breathes from nature.
Song and love,
Song and love,
Go from heaven, go to earth.

SERENADING SONG.

THE ROSE IN THE NORTHERN FOREST.

Alone in the wild forest
A little flower stood;
Nodded with a friendly smile,
Whispered love and faith.
Far away there in the forest,
Flower, thou art dear to me,
Yea, thou art very dear to me.
Come to me, thou who took my heart;
Come to me, beautiful rose of the northern forest.

Stay not in those wild forests,
But come to thy faithful friend;
Tell me my hope was not deceived,
Tell me thou lovest me still.
Far away there in the forest,
Flower, thou art dear to me,
Yea, thou art very dear to me.
Come to me, thou who took my heart;
Come to me, beautiful rose of the northern forest.

The day after my arrival I witnessed the graduation ceremonies. At 9.30 A.M. the old graduates of the University met, and marched in procession to the cathedral. They had come from every part of the country to do honor to their alma mater; and among their number were governors of provinces, noblemen, officers in uniform, judges, lawyers, merchants, farmers, and white-headed men bent with age. Those who were not in uniform were arrayed in full evening dress, with high silk hats—for the Swede is precise, and even formal, on gala occasions. In deference to the custom of the place I had put on a dress-coat, but unfortunately I had no high hat with me, and therefore wore a Panama hat. When I joined the procession I felt quite uncomfortable; but it could not be

helped, and so, two by two, we marched to the cathedral, the dense crowd in the streets looking at us, and now and then, by voice or gesture, showing that they recognized some of the great men of the country in the ranks. The students, in dress-coats, followed the procession of their elders, and all entered the old brick pile which constitutes the cathedral of Upsala.

The large building was crowded to suffocation, almost entirely by ladies, who were tastefully but simply dressed according to Swedish custom; the variegated colors of their attire added to the interest of the scene. The body of the church was reserved for the students, all of whom wore their white caps. One of the student-ushers, whose badge was a red scarf, kindly took charge of me, and gave me a good seat. In front of the altar was a large body of collegians, all in evening dress, who were the musicians of the occasion. Near them was a brilliant cluster of young ladies, one of whom, a distinguished soloist, was a Norwegian. A platform, from which the degrees were to be given, was occupied by the Chancellor and Faculty of the University; while in front were venerable men who had graduated half a century before. All classes were mingled in the crowd: the *flicka*, with her handkerchief over her head, was there by the side of the grand dame.

The ceremonies began with a grand chorus by the young ladies, in which a few male voices blended; this lasted about half an hour. Then, after a short pause, the rector delivered a speech in Latin, occupying about twenty-five minutes, but receiving little attention; this was a part of the programme required by custom. At the conclusion of the address he placed upon his own head a crown of oak leaves. This seemed to be the signal for a peal of four guns, the echoes of which reverberated among the arches of the old cathedral. Then the grand chorus again burst forth in a superb strain, singing a song composed by one of the students. As the name of each graduate was called, and the crown of laurel was placed upon his head, the booming of a cannon was heard; he then received his diploma. After this ceremony there was more sing-

ing, and then two of the graduates, *Primus* and *Secundus*, ascended the platform and delivered the valedictory in Latin.

As I looked at the crowd around me, I thought I could recognize, by their beaming faces, the fathers, mothers, sisters, and sweethearts of the scholars who had passed the ordeal. Some of the young men had just been married, and others were about to be. Years of study had been rewarded on this day, and the graduates, who were the heroes of the hour, walked through the streets with their crowns on their heads. Their joyful student-life was over; the time for parting had come; but their dear Upsala and alma mater were never to be forgotten. The alumni had come from every part of Sweden, and their white caps would soon be seen in the far North, among the mountains of Lapland, in Swedish Finland, and in every province of the kingdom.

At three o'clock precisely on that day I found myself in the Linnæan Hall, with 304 other guests, eating the smörgås to gain an appetite for dinner. When the doors leading to the banqueting hall were opened, the abundance of plants gave the apartment almost the appearance of a garden; the effect was very striking. The chancellor presided at the feast, and the bill of fare was as follows:

Grön soppa (green soup), a sort of Julienne.
Cabarrus St. Julien, etc.
Pale Sherry.
Mayonnaise på lax (Mayonnaise de Salmon).
Haut Sautèrne.
Späckad Ox filet (larded fillet of Beef).
Frikasserad Tunga (Fricasseed Tongue).
Porter.
Färsk Sparris (fresh Asparagus).
Hockheimer and Selters.*
Kyckling med Salad (Spring Chicken with Salad).
Cabinet Cremant (Champagne Wine).
Glace och Krokan (Ice Cream and Pyramidal Cake).
Port Wine (Old Superior).
Pale Sherry.
Dessert and Moet-Chandon.

* The Swedes like to drink Seltzer water after the asparagus.

The dishes were well cooked, and the attendance was excellent—both of which surprised me, on account of the great number of guests. As the dinner advanced the more lively the company became, and there was a continual drinking of toasts between friends at dessert; the health of the king was proposed and drank, but without any speech-making, and several other toasts were duly honored. Then came a general moving to and fro, for the wine had made every heart merry: From the porch we looked into the Botanic Garden, where several thousand persons had gathered in a beautiful avenue facing the building. The assembly was composed of ladies, pupils, and the populace. Singing was demanded, and the students struck up the grand chorus:

STUDENT'S SONG.

(SWEDISH.)

Sing the student's happy days,
Let us enjoy the spring of youth;
Still the heart beats with healthy throbs,
And the dawning future is ours.

No storms do yet
Dwell on our minds;
Hope is our friend,
And we its promises trust
When alliance we form
In the grove,
Where the glorious laurels grow,
Where the glorious laurels grow—hurrah!

Coffee was then served, and immense bowls of Swedish punch were provided for the whole orderly body, *ad libitum*. The Archbishop of Upsala, the Chancellor, and the Rector of the University were put by force on chairs and carried through the throng on the shoulders of the students, amidst cheers and general merriment. The old became young again: there were no distinctions of rank; professors and students walked about arm-in-arm. I lost my friends in the crowd, and stood astonished at the scene of tumultuous joy: evidently the punch was beginning to tell. Close to me, in the great throng, was a gentleman dressed in full uniform, who inquired in an exceedingly

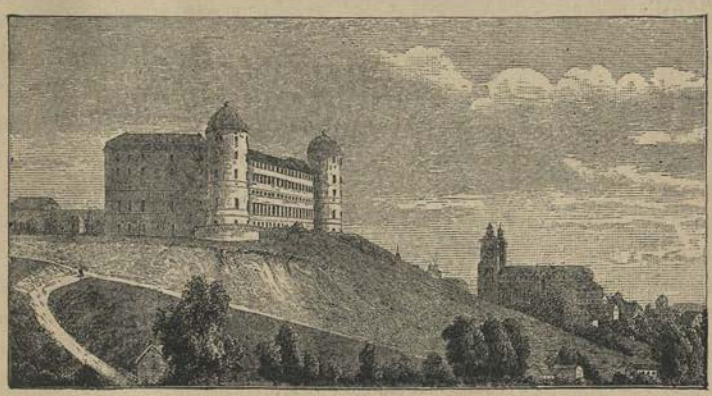
pleasant manner, and in perfect English, if my name was Du Chaillu, and then introduced himself as Count Hamilton, Governor of the Län of Upsala. He invited me to visit him the next day at his residence in the *slott*, or ancient palace.

The festivities of the day ended with a grand ball (*Promotionsbalen*) in one of the halls of the Carolina Rediviva, which contains the superb library of the University. I was surprised at the selection of the place, for it seemed a reckless act to expose that fine collection to such a risk. More than two thousand wax candles were burning, and the hall was tastefully arranged, with a little fountain at one end of the room sending up jets of water and helping to cool the atmosphere of the overcrowded hall. Everybody was in evening dress, and the young ladies mustered in full force from every part of the country; Swedish beauties were there, as numerous as violets in the grass. I admired the simplicity of their attire; white muslin dresses, trimmed with ribbons of different colors, predominated, and the hair was arranged simply but tastefully. The hall was so crowded that those who desired to dance could hardly find room. Many applications for admission had been refused for want of accommodation. I met one American to whom I was not a stranger; he had been a student at the University of Michigan, in Ann Arbor, when I lectured there. His journey to Sweden had been undertaken for the purpose of studying the history of the country.

The following day I went to the old castle, where I was received with great kindness by the governor, the countess, and all the members of their family, and found a company of distinguished guests, who had come to attend the graduation ceremonies. Every one spoke English; the governor, the countess, and their eldest daughter speaking it exceedingly well; in fact, nearly all present had a good command of the English, French, and German languages. In a short time I felt at home, as is always the case where tact, culture, and pleasant manners lend their charms. When the time for leaving came, I reluctantly bade farewell to those who had received me so kindly.

The Swedish branch of the house of Hamilton, represented

by the Governor of Upsala, is descended from Claudius, Baron of Paisley, one of the sons of James, fourth Duke of Chatelherault. The sons of Malcolm, Archbishop of Cassel, entered the Swedish army under Gustavus Adolphus in 1624, and distinguished themselves greatly, and were allowed by the sovereign, as a recognition of their services, to take the baronial title of their grandfathers in Scotland. They are highly honored and respected in Sweden. The Countess of Hamilton is the daughter of the illustrious Swedish historian, Geijer.



UPSALA SLOTT (CASTLE).

A part only of the old castle is occupied by the governor. It presents a very imposing appearance, and commands an extensive view. Some of the walls of this enormous brick structure are twelve feet in thickness. Scenes of centuries gone by come vividly before the student of history when he visits the pile. The murder of Nils Sture and others, by the crazy and blood-thirsty Erik, marking an era of bloodshed and murder in Sweden, is one of these historical memories.

The students' concert was given the next day. The ball-room had been transformed in a few hours into a concert-room, and the same students who were the ushers at the ball were again on duty. They certainly tried to do all they could to entertain those who came to Upsala. As at the ball, the room was far too small to accommodate all who wished to hear, for the finest voices of the University had been chosen

for this occasion. The audience was almost entirely composed of ladies, the gentlemen having given way, so that there would be more room, for this was the crowning entertainment of the festival. The first piece on the programme was the song, "Hör oss, Svea" (Hear us, Sweden), which was followed by "The Solvirkning" (The Sun's Effects), by Kjerulf, and "The Brudefærd i Hardanger" (The Bridal Journey by Hardanger), both Norwegian songs. The audience was apparently cold; but the last-named piece was received with enthusiastic applause.

STUDENTS' MARCH.

(SWEDISH.)

Hear us, Svea,* mother of us all;
Bid us battle for thy welfare, and fall!
Never, never, shall we thee forsake:
Take our oath, the same in all our fates!
With life and blood shalt thou be defended,
The free land which still is ours—
Every part of the inheritance,
Thou gav'st in saga and in song.
And if by deceit, treason,
Discord, and violence thou threatened be,
Yet will we believe in the Lord's name,
As our ancestors believed once:
"Our God is a powerful fort,
He is our armor tried;
On him, in all our sorrows and wants,
Our hope we will build."
Glorious, glorious will it be—
Victorious in the battle stand—
Far more glorious if we, however,
For thee, oh mother, do fall!

THE SUN'S EFFECTS (*Solvirkning*).

(NORWEGIAN.)

'Way in the mountains, under the pine-clad slopes,
There is an open vista;
There winds the sæter path,
There tumbles the foaming stream in cascades!
The shimmering air is bluish-white—
It is the midsummer's sun, and mid-day time;

* Svea, Sweden.

The glittering beams are playing
On the river, under its dark shores,
And the fog's dim spray rises quietly
Where the foss hastens down to the deep.
There the river wanders its hidden way,
The blazing midsummer sun it knows not;

But the slope under the mountain
Is wrapped in a golden flood of light!
See the spruce on the mountain's top,
With shining cones and shaded base:
By the path trembles with silver glitter
The blooming heath, the moss-clad precipice.

BRIDAL JOURNEY BY HARDANGER.

There's breathing a sparkling summer air
Warm over Hardanger fjord's waters;
How high towards heaven, in bluish tint,
The mighty mountains range!
It shines from the glacier, it's green on the hills—
In its holiday garb has nature dressed itself.
See there! Over green clear waves
Homeward glides a bridal train.

Like an old-time king's daughter so proud,
With golden collar on, and scarlet,
In the stem sits the splendid bride,
So fair as the fjord and the day.
Happy the bridegroom swings his hat:
Now he brings home his dearest treasure,
And sees in the eyes mild
His life as a bridal feast.

All murmur the enchanting cadences
Of tunes and melodies over the waves;
From mountain to mountain rolls the report of the gun,
And shouts of joy answer from the forest.
With the maids of the bride there is joking;
And the kitchen-master has not forgotten
To fill, incessantly, the jug,
To the honor of the bridal house.

So they go forth, playing in joyful strain,
'Way over the shimmering surface,
And boat after boat joins the throng
With wedding-guests so joyful.

The light is blue on the cliffs, it shines bright from the glacier;
The scent from the blooming apple-tree is fragrant:
Venerable stands the church on the point,
And blesses with chiming of its bells.

A dinner at the castle ended the festivities of my pleasant visit. Many of the English and American authors had been read by the guests, and the conversation was of America, England, Sweden, Europe, and of writers, thinkers, scientific men, travel and travellers, and other topics. After this we went out to the terrace, and had a magnificent view of the plain below, fresh and green with the tints of spring, with wild-flowers in bloom. Immortelles were abundant, and many were gathered and made into a wreath by the two young ladies of the house, and they crowned me with it in the presence of the company—an unexpected and undeserved compliment. The youngest daughter, a charming and modest young girl of thirteen, with fair hair, blue eyes, and a delicate complexion, gave me a little bouquet of forget-me-nots and immortelles, which I immediately placed in my button-hole, to the intense delight of her childlike nature. I have kept the wreath and the flowers as mementos of a delightful visit, and sometimes I wonder if that pleasant family still remembers me.

CHAPTER XXIX.

The Stone, Bronze, and Iron Age of Scandinavia.—Climate of the earlier Stone Age.—Extinction of the Great Mammals after the earlier Stone Age.—The Kjökkenmöddinger, or Shell Heaps.—The Builders of the Stone Age Graves.—Rude Implements.—Pottery.—Four different Groups of Graves.—Stone-heap Graves.—Passage Graves.—Stone Coffins.—The Bronze Age.—Strange Rock Tracing.—Graves with Burned and Unburned Bones.—Bronze and Gold Implements or Ornaments.—Pottery of the Bronze Age.—Rock Tracing, with Horses and Cattle.—End of the Bronze Age.

For the better understanding of the contents of this chapter on the prehistoric races of Scandinavia, it may be well, in the first place, to give the usually accepted classification of the "ages" of primitive man. None of these prehistoric ages are sharply defined, but run by degrees into each other. This classification specifies not divisions of time but degrees of development, indicated by the materials used for domestic and warlike implements by man before the historic period. There are three—the *stone, bronze,* and *iron* ages; the first being the earliest, and the last gradually merging into the historic period.

1. During the *earlier stone age* the climate was colder than now; then man in Europe co-existed with the mammoth, rhinoceros, hippopotamus, musk-ox, and other large and small mammals. The implements used were of *rough* stone, and pottery and metals were unknown. The people dwelt in caves, living principally on the flesh of reindeer, which were then found in Central and Southern Europe; hence they were called "cave men," and the time the "reindeer period."

In the *later stone age* the great mammals had become extinct. Metals were as yet unknown; but hand-made pottery was used. To this age belong the Scandinavian refuse-heaps (*kjökkenmöddinger*), some of the Swiss lake dwellings, and most of the burial mounds described in this chapter. Rough

stone implements continued to be used, as, in fact, they did through the subsequent ages, but most were *polished.*

2. The *bronze age* is characterized by the use of that metal, and of gold, amber, and glass for ornaments. The pottery was better made, with geometrical markings. Stone continued to be used for arrow-heads, spear-points, and knives. The characters of the tumuli and their contents are described beyond.

3. Of the *iron age* it will be sufficient to say here that the use of the ordinary metals was known, and that civilization had advanced from the savage and nomadic state to that of agricultural communities, with fixed habitations, laws, and government, and that then was ushered in the historic age, which was semi-barbarous at best, judging by modern standards.

The two most essentially heterogeneous races now inhabiting the Scandinavian peninsula belong to the straight-jawed division; but the Lapps are brachycephalic, while the others are dolichocephalic. The greatest number of skulls found in graves of the stone age are dolichocephalic, but a good many are brachycephalic, or similar to those of the Lapps — thus showing that two different races must have inhabited the country during this period. Generally the dolichocephalic skulls are even more elongated than those of the present people. To which of these types those of the earlier stone age in Scandinavia belonged can only be conjectured, as no graves of that period are as yet known in the country. It is, indeed, highly doubtful if it had any inhabitants during this remote age; at any rate this has not been proved with any degree of certainty.

After the geological separation of Scandinavia from Northern Germany by an intervening ocean, as explained in the chapter on "Geology," there were no reindeer in Sweden; the kjökkenmöddinger do not contain their bones, though these occur in the peat bogs of Denmark and Sweden, as migration from the south was no longer possible. The ure-ox lived there then, and even in the succeeding age.

The builders of the stone-age graves were a strong people, acquainted with the use of fire, having domestic cattle, and, to some extent, were agriculturists.

Among the oldest traces of man in Scandinavia, as we have said before, are the kjökkenmöddinger, or piles of kitchen refuse — like the modern dust-heaps, containing all kinds of household rubbish — from which we can form an idea of the habits of life among these people. These heaps consist of oyster and mussel shells, bones of fish, birds, and mammals, such as the deer, hog, beaver, seal, ure-ox, bear, fox, wolf, lynx, marten, etc., with remains of clay vessels. That, however, certain parts of Sweden were inhabited at the time of the Danish shell heaps, is shown by the fact that flint implements of the same shape as those of the kjökkenmöddinger have been found in Skåne.

These heaps prove that the inhabitants of the North, in prehistoric times, and perhaps only three thousand years ago, lived in a most primitive state. Among and near these are found great numbers of rude implements and tools made of flint,

CLAY VESSEL FROM THE STONE AGE, FOUND IN A GRAVE IN SKÅNE. THREE-EIGHTHS ITS REAL SIZE.

COARSE CLAY VESSEL, FOUND IN A STONE COFFIN GRAVE IN VESTERGÖTLAND. THREE-EIGHTHS ITS REAL SIZE.

bone, horn, and of broken flint chips; also fireplaces made of a few stones put roughly together—one of the oldest examples of man's ingenuity—showing that the people at that period were exclusively hunters and fishermen. Large numbers of these stone implements are found in the museums of Sweden and Norway. The refuse heaps on the peninsula of Scandi-

navia, though very ancient, are of a later date than those found in Denmark.

It is only necessary to compare the rude flint implements of the earlier stone age in Skåne with the fine ones from a later period, to see what progress man had made before the discovery of the use of metals. Of utensils there have been found only the clay vessels before mentioned, one of which had been taken from a grave in Skåne; the other is a clay vessel from a grave mound at Herrljunga, in Vestergötland. The tools found in the refuse heaps are the coarsest, and the progress to more finished ones has naturally been slow.

THREE-EDGED ARROW-POINT OF FLINT. TWO-THIRDS ITS REAL SIZE.

In the latter part of the stone age domestic animals had been introduced, as shown by the bones of cattle, horses, sheep, pigs, and dogs found in the graves. No matter how low a people are, they wear ornaments of some sort, and, accordingly, in the stone age beads of bone and amber were worn, as found in graves in Vestergötland.

ARROW-POINT OF BONE, WITH TWO ROWS OF FLINT SPLINTERS MORTISED INTO IT. ONE-HALF ITS REAL SIZE.

No graves of the earlier stone age have been discovered on the peninsula of Scandinavia, but a great many exist belonging to the later period of that epoch. These graves may be classified in four groups: Stone-heap graves (*stendösar*); passage, or gallery graves (*gånggrifter*); free-standing stone coffins (*hällkistor*); and stone coffins covered by a mound of earth or stones, showing a considerable advance during the latter part of the stone age. The stendös graves are the oldest, and the coffins covered with mounds the latest, and show the transition to the bronze age.

The study of these graves is one of intense interest, and I never could stand before them without a feeling akin to rever-

ence, for they embodied the vanity of human life: man comes, goes, and is forgotten; the tomb that is revered to-day by a whole people is desecrated by those who follow them in the wake of time.

The stendösar, cromlechs, or dolmens that have been found, consist of from three to five stones, raised in the shape of a ring, with a large block on the top. These were intended for a single body, buried in a sitting position, accompanied by flint implements and weapons; the walls of the chamber are formed by large thick stones, standing upright, reaching from floor to roof—on the inside smooth, but on the outside rough; the floor consists of sand, gravel, and the like; the roof is formed by one, sometimes by several large blocks of stone, which also are smooth on the inside, but otherwise irregular. The form of the chamber is square, pentagonal, oval, or nearly round; its length varies between 8 and 15 feet; width, 5 to 7 feet; and height, 3 to 5½ feet.

FLINT TOOL FROM THE OLDER STONE AGE, SKÅNE. THREE-QUARTERS ITS REAL SIZE.

Most of them lie in or on top of a mound which almost always leaves the roof, and in most cases part of the walls, uncovered. The mound, which is generally round, sometimes oblong in Sweden, is surrounded at its base by stones, often very large. When this is oblong, the stone grave lies nearer to one end than the other: occasionally two graves are found in such an oblong shape.

The stone grave shown on page 337 is near Haga, in Bohuslän; the chamber, nearly square, is surrounded by five wall stones; its length on the floor is 7 feet, width and height nearly 6½ feet; the greatest length of the roof-stone is 10 feet. When pressed hard in one place by its border, the big stone is made to have a rocking motion, which gives rise to a hollow, muf-

fled sound. Such a position has been observed at various stone graves in the North, and in other countries.

Gallery graves (*gånggrifter*), described and figured here (they have all been built by dolichocephalic races), were probably for the families of the chiefs, and intended to last for generations; they therefore do not belong to the savage period, though of the stone age. No traces of the dwellings of this period have been discovered, as they were probably more or less underground, constructed of small stones, which would fall in, or of earth, which would in time disappear. These graves consist of a chamber, and a narrow gallery leading into the same; the whole is covered by a mound, the base of which is generally surrounded by a circle of larger or smaller stones. The illustration on page 338 gives an idea of these graves, which are sometimes very large.

FLINT PONIARD, SMALAND. ONE-HALF ITS REAL SIZE.

The chamber in a passage grave is either oblong, square, oval, or nearly round; the walls resemble those of the cromlechs, and are formed by large upright blocks, not quite smooth, though even, on the inside; the interstices are generally carefully filled in with stone fragments, gravel, and the like; sometimes birch bark is found between the blocks. The roof is formed by immense flat slabs or blocks, smooth on the underside but rough on the top; the interstices between these are closed in the same manner as those in the walls. The floor is sometimes covered with small flat stones, but is usually of earth.

On the long side of the chamber—the eastern or southern—there is an opening from which a passage is built in the same manner as the chamber, only longer and narrower. This passage, at least its inner part, is covered with blocks resembling

the roof blocks of the chamber, but smaller. Near the inner opening of the passage and the outer end of its covered part is quite often found a kind of door-setting, consisting of a threshold stone and two narrow door-posts.

A passage grave near Karleby church and Falköping was opened in 1872; just inside the threshold was found a flat nearly rectangular limestone slab, of the same width as the outer door opening, which had probably served as a door, although it had fallen down. The Swedish passage graves vary much in size. The length of the chamber is from 11½ to 23

CROMLECH NEAR HAGA, BOHUSLÄN.

feet, its width 5 to 10 feet, and height 3½ to 4½ feet. The passage is often as long as the chamber, frequently longer; its width 2 to 4 feet, and height 3 to 5 feet. Some in the neighborhood of Falköping, where most graves of the stone age are found, are much larger, the chambers being from 30 to 40 feet in length. The largest passage grave in Sweden is one near Karleby church. The chamber, which is covered by nine large granite blocks, is 52½ feet in length, width 7 feet, length of passage 40 feet.

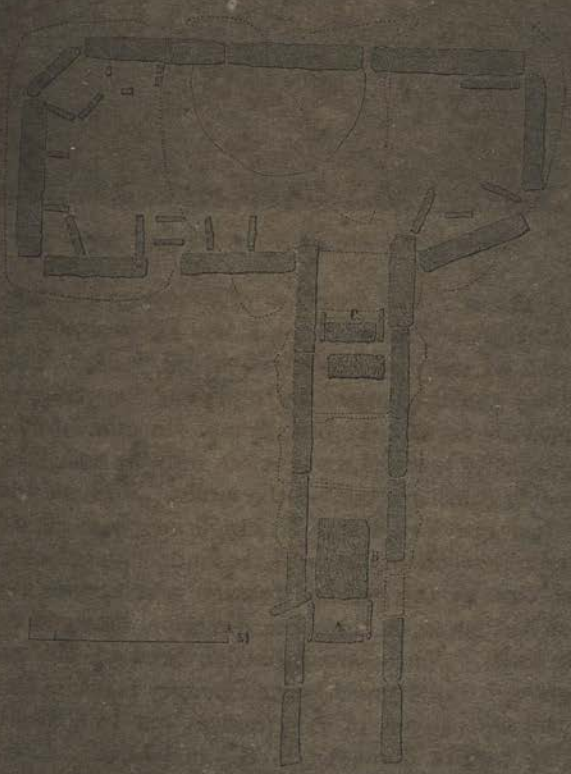
The isolated *stone coffins* are formed of flat upright stones, and are four-sided, though the two longer sides are not

parallel, thus making the coffin narrower at one end than at the other. Most of them have probably been covered with one or more stones, although these, in many places, have long ago been destroyed or removed; sometimes they are still found

PASSAGE GRAVE (GÅNGGRIFT) NEAR KARLEBY, IN VESTERGÖTLAND.

in their places. The direction of these stone coffins is almost always from north to south, and they are generally surrounded by a hill of more or less stone-mixed earth. This form of grave has probably arisen by omitting the passage. Several intermediate forms have been found, showing how the passage was gradually lessened, until it can only be traced in the open narrowing southerly end of the coffin. Such an intermediate form is a grave at Våmb Nedregården, near Sköfde, Vestergötland; from the eastern side extends a short passage, which, unlike that of the regular passage graves, runs in continuation of the grave in the same direction, nearly as wide as the grave itself. The communication between the passage and the grave is not formed by an opening between the door-slab and the side stones of the passage, but by a nearly circular hole, 1½ feet in diameter, in the end block. The length of the coffin, excepting the passage, is 13½ feet. In this grave

SIDE VIEW OF PASSAGE GRAVE NEAR KALLERUP.



GROUND-PLAN OF PASSAGE GRAVE.

The irregular lines show the position of the slabs covering the grave.

were found, in 1859, several skeletons, five poniards and spear-points of flint, two flint arrows, two whetstones of slate, and a bone needle.

The length of the stone coffin is generally from 8 to 13½ feet, width 35 to 60 inches, and height or depth 2½ to 5 feet. A few, especially in Vestergötland, are from 19½ to 31 feet in length. The longest known grave of this kind in Sweden is one lying on Stora Lundskullen, in Vestergötland. Its length is 34 feet, and width 8 feet. A spacious grave of this form is shown in the engraving, which, like many others with stone coffins, was by the people called the "giant house:" it lies far in the woods at Skattened, in Vestergötland, near Veners-

STONE COFFIN (HÄLLKISTA) NEAR SKATTENED, IN SÖDRA RYRS PARISH, VESTERGÖTLAND, 21¼ FEET IN LENGTH.

borg. This sepulchre, which runs from north-east to south-west, is 21¼ feet long on the eastern side, which is somewhat curved, and 20½ feet on the western, which is nearly straight. The width is 7½ feet at the north-eastern end, which consists

of one flat stone, and 5 feet at the south-western, which is open, and opposite which the coffin grows narrower. The height of the stones is from 5 to 6 feet; they all stand close together, and are skilfully arranged, so that each one, without disturbing the evenness, laps a little over the preceding one, thus supporting it. Of the cover-stones, which probably have been five or six, only two are left, with a piece of a third; all now have fallen into the grave. At the south-western end lies a stone which probably belonged to the roof, or served as a door. The bottom of the coffin seems to be sunk about two feet below the surface of the ground, and on three sides is surrounded by a stone heap, over which the walls rise only a few inches.

Nearly all other stone coffins, like the gallery graves, are without a stone at the southern end. This cannot be accidental, and is a point of some importance, as this opening at the end probably may be considered as a continuation of the entrance to the passage graves, which also pointed towards the south. Another fact, which supports the opinion that the stone coffins were open at the southern end, is that many become lower and narrower towards that end. An additional reminder of the entrance of the passage grave is the opening sometimes found about midway on the eastern length of the stone coffin. In 1875 a coffin at Herrljunga, in Vestergötland, was examined, and such an opening, 8 feet in width, was found, the length of the grave being not less than 30 feet.

Sometimes the isolated stone coffins are not entirely open at the southern end, but have simply an opening (rounded above) in the stone at this end, 2½ feet in height and 16 inches in width. Besides the stone coffins above described, there have been found several entirely covered with earth or stones, which evidently belong to the stone age. They are generally formed of upright flat stones, and covered with others, in the same manner as the before-described stone coffins; but they are usually smaller, from 6 to 10 feet long, and closed on all four sides. Sometimes, however, there is found in the southern end such an opening as is mentioned above. One of the most remarkable of this kind is that near the passage graves

at Karleby, close to Falköping, which was explored in 1874. Under a large but not very deep stone mound was found a grave made from limestone flats, divided into a large chamber and two smaller ones outside; the roof had also been made of similar stones, and even with the surrounding ground. In the partition stone, between the grave proper and the inner room, was found a rounded opening, 2 feet in width; the outside of this opening was closed by a kind of door, consisting of a smaller flat slab, kept in place by round stones. In the partition between the inner and outer ante-chambers was also

CROMLECH (STENDÖS) WITH CONCAVE RECESSES ON THE ROOF-STONE, NEAR FASMORUP, IN SKÅNE.

an opening 2½ feet in width, which, however, was in the upper end, and was closed by a larger flat. The length of the larger chamber in the centre was 13 feet, its width 6¾ feet, and height 6 feet. In it were found more than sixty skeletons, and by their sides a large number of poniards, spear-points, arrow-heads, and other works of flint, showing that the grave belonged to a period when stone implements were still used. It was, therefore, of much importance to find among the skeletons in the lower part of the grave a couple of bronze beads and a spear-point of the same metal, showing that the bronze age had commenced in Vestergötland at the time the grave was in use. This is not the only case in which both stone and bronze implements, probably belonging to the earlier bronze age, have been found in these graves.

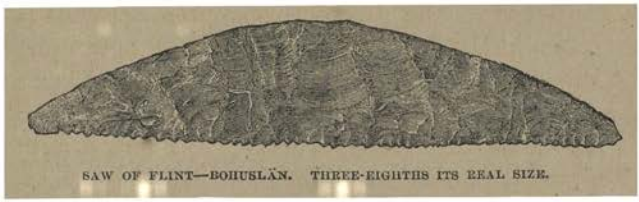
Certain marks on the top stone seem to indicate that sacrifices to the dead were prevalent; holes about two inches in width are found on the roofs of some cromlechs and passage graves. It is probable that sacrifices, under one form or another, were common during the stone age. Such a grave, with recesses on the roof-stone, is found near Fasmorup, in Skåne, and is shown on page 341. Another such grave is situated near Tanum church, in Bohuslän.

Stone implements have often been found, which, doubtless, were carefully buried with a purpose, although they cannot be considered as grave-finds. We instance a few of these: Near Ryssvik, in Southern Småland, were discovered, in 1821, fifteen large, well-polished axes, placed in a semicircle; in 1863 a similar though smaller find was made near Bro, in Nerike, where five large well-polished axes were found lying in a row on the shore of the partly dried lake Mosjön; near Knem, in Tanum parish, Bohuslän, were found, in 1843, seven saws, a spear-point, and a scraper, all of flint, beside each other under a flat stone; near Skarstad, in Bohuslän, were found, in 1843, beneath a smooth slab, ten flint saws of the same shape; also, in Skee parish, in Bohuslän, some years ago, ten similar saws, wrapped in birch-bark, were unearthed. Similar finds have been made in peat-bogs. Thus, in 1863 were discovered in a bog near Halmstad twenty of these saws buried close together.

FLINT AXE, WITH MARKS FROM THE HANDLE—SKÅNE. ONE-SIXTH ITS REAL SIZE.

The province of Vestergötland is the richest in relics from the stone age. Next in richness are Skåne, Bleking, Halland, Bohuslän, Dalsland, and the south-western part of Vermland. On the plain around Fahlköping are still found, in spite of centuries of cultivation, a larger number of graves of the stone age than anywhere else; rich in reminiscences of this era are also certain parts of Småland, especially the western districts and that part of the

interior around the large lakes and waters which, through the rivers of Blekinge and Halland, are connected with the sea.



SAW OF FLINT—BOHUSLÄN. THREE-EIGHTHS ITS REAL SIZE.

It seems the more remarkable, therefore, that not a single grave of the stone age has been found on the east coast, and also that the scattered relics of this period, so numerous in the western coast districts, are very seldom found in the eastern, north of Kalmarsund; and that both graves and antiquities of this age are very rare in Gotland and Öland, which are so rich in relics of the later periods of the heathen time. It is worth special mention that the different antiquities and grave-forms are not uniformly distributed over that part of Sweden which was inhabited during the stone age. The implements typical of the oldest stone age hitherto known in Sweden have nearly all been obtained in Skåne; and in this province have also been found a comparatively large number of flint axes, belonging to the more recent stone age, which in the country north of Skåne are more rare.

UNPOLISHED FLINT AXE (OLDER SHAPE). ONE-SIXTH ITS REAL SIZE.

All this seems to show that Skåne was not only the most thickly, but one of the earliest inhabited parts of the peninsula. Still more remarkable is the distribution of the different forms of graves. These, as already mentioned, are: (1) Stendösar cromlechs; (2) Passage graves; (3) Free-standing stone coffins; and (4) Stone coffins covered with mounds of stone or earth; which latter belong to the end of the stone age, and were also

in use during the first period of the bronze age. Now it happens that cromlechs are found only in Skåne, Halland, and Bohuslän, and on the island of Öland, where, however, thus far only four have been discovered, and these very close together. With the exception of this solitary group, the cromlech—the oldest form of grave now known—is seen only in Skåne and on the west coast; the most northerly one in Sweden lies near Masselberg, Bohuslän: in Norway only one is known, not far from the boundary of Bohuslän.

The graves next in age, the passage graves, are very numerous in Skåne, but especially in Skaraborgslän of Vestergötland; a few also are found in Bohuslän. Of the 140 passage graves at present known in Sweden, more than 110 are in Skaraborgslän, and most of them near Falköping. From the part of Vestergötland belonging to Elfsborgslän only two graves with plain passages occur, and they differ considerably from the passage graves proper. The stone tombs, which seem to be the latest graves of the stone age, have a much wider distribution than the older forms. Free-standing ones of the latter (*hällkistor*) are very numerous in Vestergötland, especially in Elfsborgslän, in Bohuslän, Dal, and South-western Vermland. The mound-covered sepulchres belonging to the stone age are found in nearly all provinces where the older forms of graves occur; they also occur in Blekinge, Småland, South-western Östergötland, and on the island of Gotland—in other words, in those neighborhoods where the other forms have not been found. The cromlechs (stendösar), it must be remarked, always occur near the sea, seldom more than seven miles from the coast. The other graves of the stone age are, as before mentioned, often found far inland; but they almost always are near a lake or river having connection with the sea, and which still are, or have been, important.

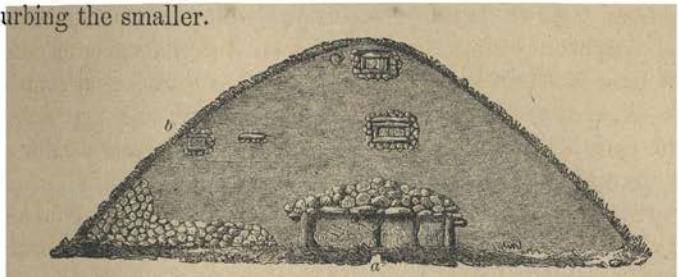
All this proves decidedly that Skåne and the west coast were first occupied by the original inhabitants; that the population afterwards gradually spread towards the north and north-east, and entered into the interior by following the rivers and the shores of the large lakes, or the coast of the Baltic; and that

the eastern parts of the country—Småland and Östergötland—as well as Gotland, were the first, towards the end of the stone age, in having any population worth mentioning. Of how little importance the population of the eastern was in comparison with that of the western provinces is well shown in Södermanland, where the relics of the stone age are much more rare in that part lying near the Baltic than in the south-western part, in the neighborhood of Wingåker. The explanation may be found in the fact that one branch of the population went from the important settlements in the northern part of Vestergötland, over Nerike, into Western Södermanland. It is also evident from the preceding facts that the people who left behind them these antiquities must have come from the south, or rather south-west—that is, from Denmark. This migration from the south-west is the more remarkable, as that from the south-east and the regions to the eastward, during the following periods and up to the later centuries, has been of so much more importance to the country. When it is remembered what important parts Öland and Gotland played during the iron age, it merits special attention that the relics from the stone age are so rare on these islands.

Besides the already mentioned antiquities from the stone age, which have been found only in the southern and middle parts of Sweden, in the northern parts are to be seen several antiquities of polished stone—generally slate—which themselves show that they do not belong to the South Scandinavian stone age, nor to the people who built cromlechs and passage graves. These antiquities, called "arctic," have been found mostly in Norrland and Lapland, where stone articles of South Scandinavian types are very rare. That the last named belonged to a different people from the arctic ones is shown by the fact that the two kinds have never been found together; that the arctic antiquities show great similarity to those found in Finland; and that Lapps, Finns, and kindred people inhabited northern countries, where stone implements of the same shapes and material as those of South Scandinavia are almost unknown.

In a few instances the spear-points and knives of slate pe-

top of the mound, and one of the two other small coffins, contained, besides the bones, antiquities from the bronze age; and there is no doubt that the other three also belong to the same period. It is evident that the large coffin with the unburned bones in the bottom of the mound must be older than the others, as the large one could not have been built without disturbing the smaller.



PROFILE OF A GRAVE MOUND NEAR DÖMMESTORP, IN SOUTHERN HALLAND.

Nearly every mound of the bronze age, in which a grave with unburned bones has been found, has also contained graves with burned bones; but the former has always been nearer the bottom than the latter. It follows, therefore, that graves of the bronze age with unburned remains must be considered older than the graves with burned bones. It may be added, in confirmation of this, that several graves with unburned bones, considered as belonging to the early period of the bronze age, are very similar to those belonging to the next preceding period of the stone age, and that those of the end of the bronze age have developed out of those belonging to its beginning; hence it may be said that the form of the Swedish graves runs in an unbroken chain of development, the beginning of which is the large grave-chamber of the stone age, and the end the insignificant preserving places for handfuls of burned bones. The oldest known graves of the bronze age in Scandinavia are stone coffins enclosing several skeletons; these finally decrease in size, until they become only about 6¾ feet long, or just large enough to contain one body. These stone coffins, of the length of an average man, are interesting, as indicating the transition to the small ones containing burned bones; some of these, of a size calculated

for an unburned body, have contained only a small heap of burned bones, and evidently belonged to the period when the cremation of the dead began to prevail.

Many of these little stone coffins are only large enough to enclose a clay pot, in which the bones were collected. Sometimes no coffins were found, but only clay pots with ashes, a small bronze knife, a bit of a bronze saw, or something of that kind. Finally, in some cases the bones were put singly in a hole in the mound, and the whole covered with a stone slab. From traces in graves of this age it is probable that in Scandinavia serfs were sometimes buried with their masters. Of furniture and utensils nothing has been preserved except vessels of burned clay, bronze and gold, and here and there some of wood, which of course were very common, but have rarely withstood the ravages of time. The clay vessels are of many

CLAY VESSEL—HALLAND. ONE-EIGHTH ITS REAL SIZE.

CLAY VESSEL—HALLAND. ONE-FOURTH ITS REAL SIZE.

CLAY VESSEL—SKÅNE. ONE-EIGHTH ITS REAL SIZE.

different forms, but often inferior to those of the stone age in ornamentation and purity of the material used.

In two graves, which certainly belong to the period in question, round boxes of thin wood with covers, nearly like those

still in use, have been found. Most of the bronze vessels have the form herewith shown, and are not unfrequently found, together with a kind of cover of bronze, either provided with two handles like the utensil, or with wheel-formed buttons, to which the straps joining vessel and cover were fastened. The latter is always so much smaller that it apparently has not

COVER OF VESSEL.

HANGING VESSEL OF BRONZE FOUND IN VESTERGÖTLAND. THREE-EIGHTHS ITS REAL SIZE.

been put immediately upon the vessel, but has been fastened a little above it. The use to which these vessels were put is as yet unknown.

The gold vessels found in Blekinge have, in all probability, been used as drinking bowls; they are very thin, ornamented with figures in raised work, and probably belong to the later periods of the bronze age.

Near Kivik, in Skåne, is situated a large stone mound, in the centre of which a capacious stone coffin was found. This coffin is fourteen feet long, three feet wide, and four feet high. The inside of the stones are cut as shown in illustration below; the signification of them is yet in dispute, and the grave probably belonged to the earlier part of the bronze age.

GOLDEN BOWL — BLEKINGE. ONE-HALF ITS REAL SIZE.

On the drawings on the rocks in many places are seen horses and oxen, and in the graves are found remnants of hides, woollen clothes, sword and poniard scabbards of skin, works in horn, etc. That the horse was used for riding can be seen on the rock drawing near Tegneby, Bohuslän (p. 351). Wagons also were used, as seen on the coffin slabs near Kivik.

ONE OF FOUR COFFIN SLABS NEAR KIVIK, IN SKÅNE.

On a rock drawing at Tegneby, in Bohuslän, a man is seen ploughing. The plough is of the most primitive kind, and is drawn by two animals, probably oxen or bulls. This large tracing is highly interesting as one of the oldest indications of agriculture found on the peninsula of Scandinavia. Other reminiscences thereof are the simple scythes of bronze found in Östergötland. The grain was probably crushed in a hand-mill.

CLOTHING, ORNAMENTS.

On the rock drawings are often seen human figures, sometimes of nearly natural size; but none of them give any idea of the clothing worn during the bronze age. Recently there

HORSEMEN REPRESENTED ON A ROCK CUTTING AT TEGNEBY, IN TANUM PARISH, BOHUSLAN. ONE-TWENTY-FOURTH ITS REAL SIZE.

have been opened a few graves, which in an unexpected manner have let us know how the people dressed during the bronze age; the most remarkable of these is a large mound at Dömmestorp, in Halland, which contained a coffin made of carefully joined stone slabs, about forty inches in length. When the cover stones were removed the coffin was found entirely free from sand or earth, so that its contents could be easily examined. On the bottom lay a few pieces of burned bone, over which was spread a kind of woollen shawl; this extended over the whole coffin, and was laid in folds, in which was

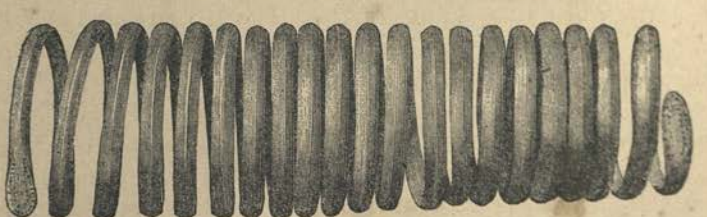
placed a bronze poniard, enclosed in a well-made and perfectly preserved leather scabbard with bronze clasps. The shawl was about five feet long and two feet wide; the color is now brown, but at each end was a light yellow border about four inches wide. Unfortunately, the cloth was so decayed that pieces only could be secured, which are now preserved in the National Museum in Stockholm.

From Danish mounds we know that the women's dress during the bronze age consisted of the same two principal parts as at the present time in use among the peasants; but if the men's clothes found in them can be regarded as a sample of their common dress, it shows a great difference even from that of the early historic times—especially the absence of trousers, which were commonly worn by all Germanic nations, though not by the Celtic tribes and the people of Southern Europe.

Many sewing implements of the bronze age, needles, awls, small pincers, and thin knives, almost always made of bronze, have been found in the graves. There have, however, been found a pair of pincers and an awl of gold. The awls, of course, were put in handles, and a few such, of bronze, bone, and amber, are still preserved; scissors were also in use. The needles are like those of the stone age, and made of bronze or bone; they are, however, less numerous than the awls, owing probably to the fact that the last were used to sew leather and skins, and the needles for sewing woollens, which were less used, and were costly.

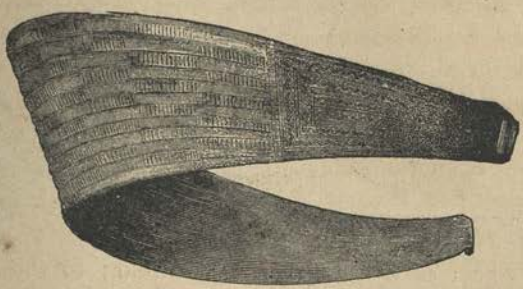
BRACELET OF BRONZE — SKÅNE. ONE-HALF ITS REAL SIZE.

Knives found in the later bronze age were probably used



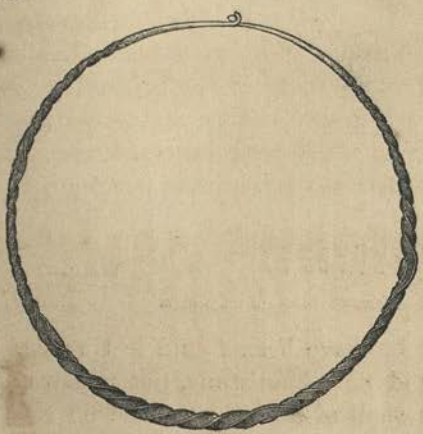
SPIRAL BRACELET OF BRONZE—SKÅNE. THREE-EIGHTHS ITS REAL SIZE.

in the making of clothing of skins, in cutting the leather and the fine strings or threads of skin with which the sewing was done: with the awl the holes were pierced, and with the pincers the thread was drawn through. They were probably also employed for other purposes.



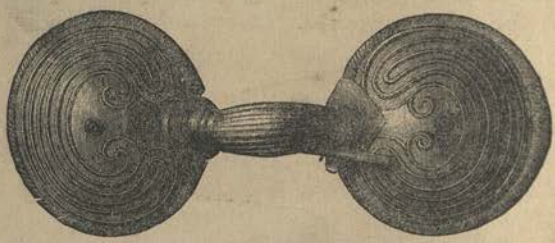
BRONZE DIADEM—SKÅNE. ONE-HALF ITS REAL SIZE.

The simple ornaments of the stone age were replaced in the bronze age by more beautiful and varied ones, principally of gold and bronze. Combs were of bronze or horn. As a general rule, the implements from the earlier period of the bronze age are remarkable for their beautiful designs, while during the later period they are much inferior. The same is true of the earlier period of the iron age, as compared with that of the later.



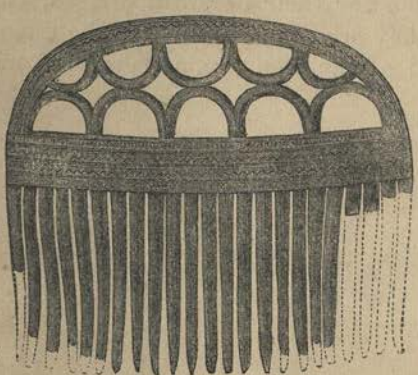
NECKLACE OF BRONZE—SÖDERMANLAND. ONE-QUARTER ITS REAL SIZE.

The weapons were, to a great extent, the same during the bronze age as in the stone age, *i. e.*, poniards, axes, spears, bows and arrows, and probably clubs and slings. The most



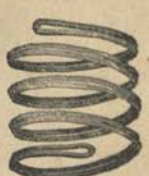
BUCKLE OF BRONZE—VESTERGÖTLAND. ONE-THIRD ITS REAL SIZE.

prominent arm of defence was the shield; to these may be added swords, and in a few instances helmets. In connection with the arms may also be mentioned the magnificent battle-horns of bronze found in several places. The shields were generally made of wood or leather, and seem to have been ornamented with a round bronze plate, with a point in the middle; they were sometimes entirely of bronze. Of swords and



BRONZE COMB. THREE-FOURTHS ITS REAL SIZE.

BRONZE BUTTON — VESTERGÖTLAND. THREE-FOURTHS ITS REAL SIZE.



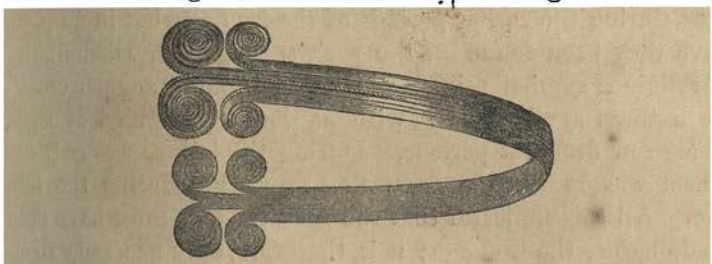
SPIRAL FINGER-RING OF DOUBLE GOLD THREAD—SKÅNE. THREE-FOURTHS ITS REAL SIZE.

poniards over 500 have been found in Sweden. Fine bronze axes were found near Eskilstuna, not massive, but consisting only of a thin shell of bronze, moulded on clay, which is still inside; they, therefore, could not have been used for actual

ROCK TRACING AT TEGNEBY.

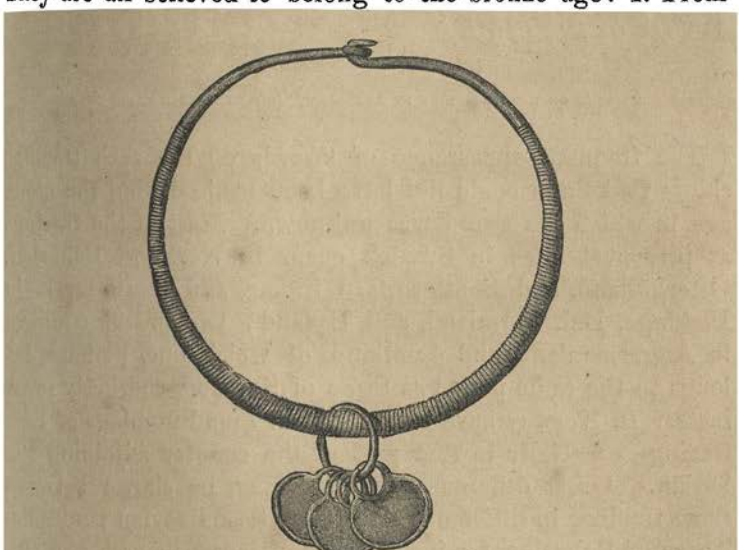
REAL HEIGHT, 26 FEET; WIDTH, 16 FEET.

warfare, but for purposes purely ornamental. A similar difficulty in distinguishing between battle-axes and axes used as tools occurs during both the stone and bronze ages.



GOLD ORNAMENT FOR THE HEAD, FOUND IN SKÅNE. TWO-FIFTHS ITS REAL SIZE.

The engravings on page 356 show vessels from rock tracings in Bohuslän. A similar one at Tegneby, in the same province, is of very large size—26 feet in height and 16 feet in width. They are all believed to belong to the bronze age: 1. From



NECKLACE OF BRONZE, WITH THREE SMALLER ORNAMENTS, FOUND IN SKÅNE. ONE-THIRD ITS REAL SIZE.

the difference between them and those on the Runic stones from the iron age. 2. The depth, for on the Runic stones the outlines only are given. 3. The different shapes of the swords. 4. The

different shapes of the vessels—those from the bronze age having the ends unlike each other, while those of the iron age are alike. 5. The absence of runas. It is known that runas were used during the earlier periods of the iron age, but in no place have they been found on the rock tracings. 6. Dissimilarity of religious symbolic signs—the "wheel" and "angular cross." Both these symbols have, without doubt, been used as such, though at different periods. During the bronze age only the wheel was in use, the cross first appearing during the iron age. All this indicates that the rock tracings must have been made before the iron age; it is, therefore, only necessary to ascertain whether they belong to the bronze age or the preceding period.

VESSELS FOUND ON ROCK CUTTINGS IN BOHUSLÄN. ONE-TWENTIETH THEIR REAL SIZE.

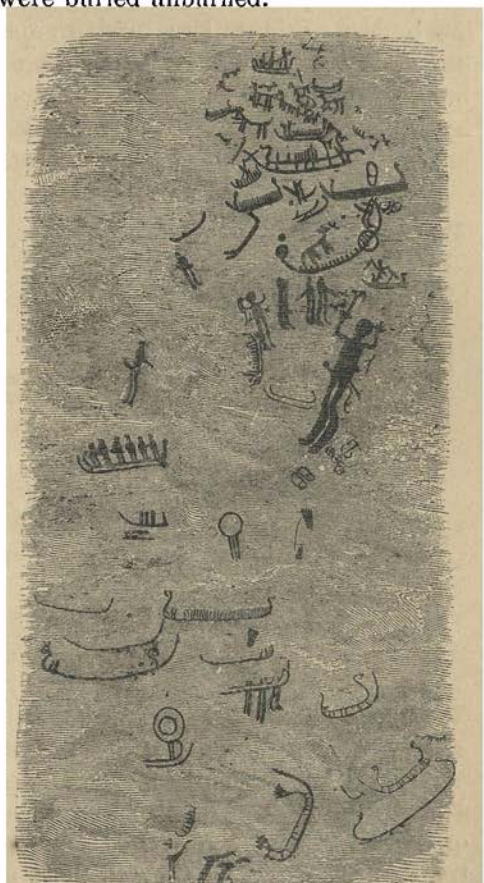
The frequent appearance of swords on the rock tracings shows that these could not have been made during the stone age, in which the sword was unknown. Most of the tracings at present known in Sweden occur in Northern Bohuslän, Östergötland, and South-eastern Skåne, and more rarely in Blekinge, Dal, Vermland, and Upland; two are also known in Ångermanland and Jemtland, of which one, perhaps, belongs to the same period as those of the more southerly provinces. In Norway have recently been found numbers of rock tracings, especially in that part of the country adjoining Bohuslän. Great difference can, however, be shown between these tracings in different parts of the Scandinavian peninsula. Those of Bohuslän, for instance, often represent men and animals, while this is rarely the case with those of other provinces. In Östergötland swords and shields, not carried by men, are not unfrequently represented, which hardly ever occurs on rocks in Bohuslän. Vessels are seen on most tracings, but their shapes are not the same in different provinces; in

almost all, however, occur the wheel-shaped symbols, the small bowl-formed recesses, sandals, and other figures. The tracings are always cut on rocks polished by the ice of the glacial period.

During the later periods of the bronze age the custom of burning the dead was introduced into Scandinavia; but in the earlier part the bodies were buried unburned.

The graves of the bronze age are generally covered by a mound of sand and earth or stones, often containing several burial-places. Many stone mounds do not belong to the bronze age, but to more recent periods of the heathen times, so that it is often impossible, without a knowledge of its contents, to determine to which period a mound belongs.

The graves generally lie on a high hill, with an unobstructed view of the sea or large sheet of water. The stone mounds, especially of this age, are situated on high rocky points.



ROCK CUTTING NEAR BACKA, IN BRASTAD PARISH, BOHUSLÄN. ONE SIXTY-SEVENTH ITS REAL SIZE.

During the stone age, to judge from the known finds of antiquities, hardly more than Götaland and certain parts of Southern Svealand were inhabited; before the end of the bronze age the country north of the Mälar, possibly also north of

Dalelfven, had been occupied. Although the settlement of Norrland by other people than Lapps probably did not occur until the iron age, two finds have been made in Medelpad which evidently belong to the bronze age: one is an exceedingly well preserved sword from Njurunda, and the other a chisel from Timra. In Finland, where the antiquities of the bronze age are quite rare, a sword has been found near Storkyro, not far from Wasa; and on the Norwegian coast bronze arms occur still farther north, even to Nordre Trondhjems and Tromsö amts.

STONE MOUND ON THE COAST OF BOHUSLÄN.

As antiquities from this age must also be regarded the few stone implements of South Scandinavian types met with north of the Mälar, sometimes as far north as Skellefteå. Besides these traces of a population in these northern parts related to the bronze age people of Southern Scandinavia, there has recently been found in Lapland a remarkable relic of that age of another people, namely, a hollow chisel; it differs entirely from those heretofore found in Scandinavia, though corresponding exactly to those found in Russia and Siberia.

Before closing our remarks on the stone and bronze epochs, it may be noted that the antiquities of the stone age are alike in the three Scandinavian kingdoms, and also in the northern part of Germany, and undoubtedly came from a people of the same origin. Several finds of that age have been found as far as the Salten fjord, latitude 67°, and even on the island of Senjen, latitude 69° 20′; but both in the north of Sweden and Norway these are very rare, and are generally met with single; and no graves belonging to that age have been found in those regions.

It is especially in the southern part of the Scandinavian peninsula and in Denmark that they have been discovered in great number. In Norway they are most common near the Christiania and Trondhjem fjords, Lister and Jæderen districts. Some have been examined inland; those of slate have been discovered only in the north.

The stone age was, no doubt, of a longer duration in the Scandinavian countries than in the rest of Europe, and the people there attained a higher civilization, as shown by their implements, which exhibit finer patterns and more finished workmanship.

The implements belonging to the bronze age contain generally ninety per cent. of copper and ten per cent. of tin. They are mostly cast, their ornaments being partly engraved, partly hammered after casting. The finds of that age have been met with hitherto in Norway as far as 66° N. in small number; they are most common in the Jæderen and Stavanger districts, and more so near the shore than inland. These, like the antiquities of the stone age, are far more numerous in the southern part of the peninsula and in Denmark. In Norway burned and unburned bodies have not as yet been found together in the same mound.

It is only from the two later periods of the iron age, mentioned in the following chapter, that Norway shows a population approximate to that of the other two Scandinavian kingdoms. The finds of the earlier iron age occur in Norway in the graves, while those of the two later periods must have been buried as treasure, as they consist often of objects of gold.

More or less extensive attempts to decipher the Scandinavian rock-tracings have been made, but with no decided results. It has been claimed by some Scandinavian archæologists that certain figures have a symbolical signification, which, no doubt, is the case. For instance, the concave recesses represent a drink or liquid; a curved line a wave, etc.; a group consisting of a ship, a bee, and such a curved line, were considered to express *mead-horn*, in the figurative sense of "the ship of the *beevawe*" (the honey-drink); a small cup with a spear-point near it was explained as meaning blood, or "the drink of the spear."

But although we cannot hope to learn the correct interpretation of these tracings, they are not entirely incomprehensible to an intelligent observer. They tell a great deal about peaceable occupations and deeds of war on land and sea of which otherwise nothing would be known; they tell of agriculture and cattle-raising; of the use of the horse for driving and riding; of vessels and navigation, for both trading and warlike purposes, showing that even at this early period the people undertook those voyages to foreign lands which, during the Viking age, culminated in their renowned expeditions.

CHAPTER XXX.

EARLIER, MIDDLE, AND LATER AGES.

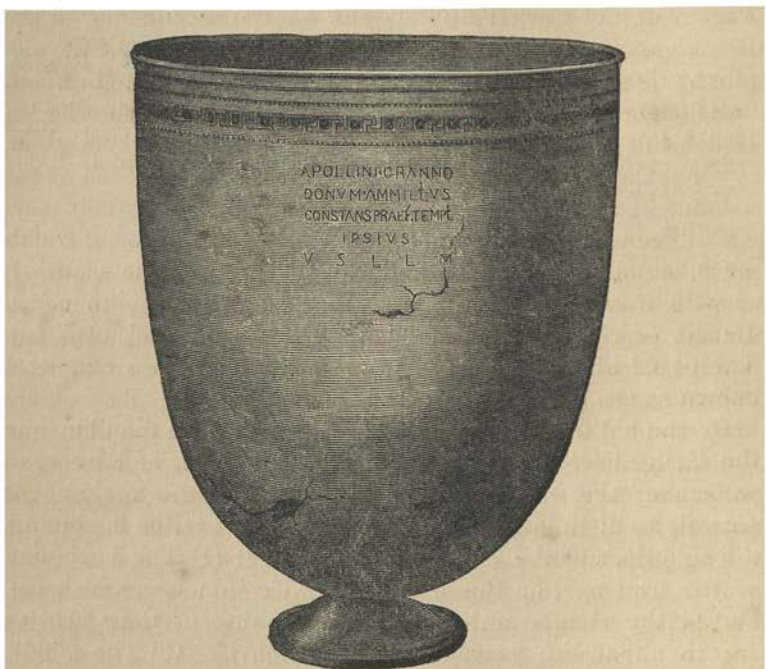
The Earlier, Middle, and Later Iron Ages of Sweden and Norway.—Their Duration.—Finds of Foreign Coin.—Commercial Intercourse with the Romans.—Numerous Graves of the Iron Age.—Interesting Finds of the Iron Age.—Beautiful Objects or Ornaments of Bronze, Silver, and Gold.—Dress of a Norse Chief.—Value of Glass-ware.—*Baustastenar* (Graves).—The Runas.—Runic Alphabet.—Earlier and Later Runas.

THE iron age includes the pre-historic period, during which the inhabitants of Sweden and Norway first became acquainted with iron, silver, lead, glass, ivory, stamped foreign coins, the art of soldering and gilding metals, etc.; and, most important of all, the art of writing in the characters or letters known as the *runas*.

By the aid of a great number of foreign coins found among the Scandinavian antiquities of the iron age, and by comparison of the graves and other remains of this period, it is possible to distinguish, at least, what belongs to the beginning, the middle, and the end of the same, viz: (1) The beginning of the iron age, or the so-called earlier iron age, which embraces the time from about the beginning of the Christian era to about the year 450 in Scandinavia. (2) The middle of the iron age, from A.D. 450 to about 700. (3) The end of the iron age, or the so-called later iron age, from about 700 to the latter half of the twelfth century.

A large number of coins, bronze and glass vessels, arms, etc., and even works of art of Roman origin, show that during the later iron age the Swedes had a pretty extensive commercial intercourse, either directly with the Romans or with some people trading with them. One of the most remarkable finds of Roman works was in 1818, at Fycklinge, near Vesterås;

here was found, in a grave-mound, a large bronze vase containing burned bones and a few pieces of melted glass. On the vase was an inscription, saying that it was consecrated to Apollo Grannus by Ammilius Constans, superintendent of the temple of the god. This magnificent vessel is about eighteen inches high, the ornaments around the upper border being inlaid in silver. Roman bronze vessels, without inscriptions, have often been discovered in Gotland.



ROMAN BRONZE VASE FOUND IN A MOUND NEAR VESTERÅS, WESTMANLAND. ONE-FIFTH ITS REAL SIZE.

In Norway a great many old graves (mounds) belonging to the iron age have been found. In these mounds quite a large number of interesting objects have been discovered; among others a piece of gold jewellery, worked in filigree, of such tasteful and finely executed design, that it is without doubt the finest piece of workmanship yet found in any mound in Scandinavia. The gold is, besides, nearly pure (23 karats).

In Hovin annex (parish), near Trögstad Railway Station, Smaalenenes Amt, is situated the so-called Raknehaug (Rakne mound), probably the largest one of any in the Scandinavian kingdoms; it measures 60 feet in height, and 300 feet in diameter at its base.

With the aid of the numerous finds from the older iron age in the North, we can gain a pretty accurate insight into life and civilization in Scandinavia during the centuries when Paganism and Christianity fought for the ascendency in the Roman world, and when the attacks on the borders of the empire by the Germanic nations became more frequent and violent, until it ended in the victory of the "barbarians," the ruin of Rome, and the apparent destruction of the ancient civilization.

From the engraving on page 364 an idea can be had of the manner in which a northern chief appeared about 1500 years ago. The representation is not an imaginary one, but can with good reason be considered historically true. The clothing, arms, and ornaments are exact drawings of those found in Danish peat-bogs at Thorsbjerg and Nydam, in South Jutland. The peat has preserved in a most astonishing manner the most delicate and generally most perishable things, so that we are here enabled to find the clothing, wood-work, and the like, from the earlier iron age, in a very perfect state. The clothes are of wool, the texture finer than those of the bronze age, and the pattern is often checkered. The principal parts of the suit are a long jacket with sleeves reaching to the wrists, and trousers, which are kept together with a leather strap around the waist, and below sewn on to long socks. The outer covering for the feet is a pair of sandals of leather, with finely worked ornaments. Over the shoulders is thrown a cloak, with lengthy fringe at the lower end. One found in these bogs has preserved its color, which is green, with yellow and dark-green borders.

In the beginning of the iron age appears another novelty, the shears, which are very similar to those now in use. The clothes during this age were generally kept together by pins or buckles, which are found in great numbers in graves of this period. Buttons or hooks are seldom seen. From the grave-

finds—the only source of knowledge about the use of these buckles and other ornaments—it has been ascertained that several buckles were worn at the same time. Thus, in a grave containing a skeleton, there were exhumed no less than four.

NORSE CHIEF IN HIS COSTUME (FROM THE EARLIER IRON AGE).

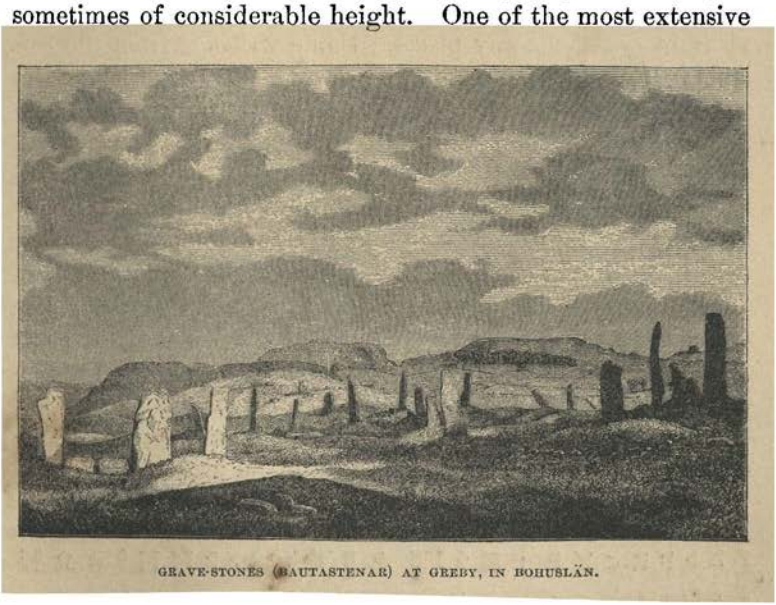
One had been used below the neck, one on each shoulder, and one on the middle of the chest. The arms were principally the same as during the bronze age, although of somewhat different shapes. Two-edged swords were common.

Horns were used during this period as drinking cups, and also Roman and domestic vessels of glass, bronze, silver, with, of course, wood and burned clay. The latter, which probably were almost entirely of domestic manufacture, are much finer,

thinner, and better burned than those from the bronze age. The shape, also, is generally very tasteful. The clay vessels from the earlier iron age, as well as those from the two preceding ages, are not glazed.

Glass was highly valued during this period, which may be inferred from the fact that in several graves have been found clay vessels in which pieces of broken glass were inserted as ornaments. Besides the drinking vessels, dice and checkers are occasionally unearthed. On a stone found in Upland, but now kept in the National Museum at Stockholm, is shown a boat from the iron age, very similar to those still in use on the coast of Norway, especially in Nordland.

Generally the graves from the iron age are covered by a round or oblong mound of earth or stone. Often they are ornamented by *bautastenar* (grave-stones), large and upright, sometimes of considerable height. One of the most extensive



GRAVE-STONES (BAUTASTENAR) AT GREBY, IN BOHUSLÄN.

grave-fields of Scandinavia is situated at Greby, near Grebbestad, on the coast of Bohuslän. There are still seen more than 150 partly round, partly oblong mounds, close together, and on the top of each, or between them, rise massive bautaste-

nar, the highest measuring not less than 14 feet above ground. The bautastenar of that period are now nearly all illegible, while the memory of those in whose honor they were erected died out centuries ago. Occasionally one of them has a short inscription, and this generally gives only the name of the dead person. At Björketorp, in Blekinge, not far from Ronneby, three magnificent stones are seen, one of which bears an inscription containing a curse upon any one destroying the monument. There are earlier runas, which are unlike those on stones from a later period. Of these earlier runa stones five are found in Blekinge, two in Bohuslän, one in Vermland, one in Vestergötland, one in Östergötland, two in Södermanland, and two in Upland.

THE RUNAS.

As late as the beginning of the sixteenth century the use of Runic characters was still prevalent among the Scandinavians in out-of-the-way places. Some writings from the earlier periods of Christianity in Norway and Sweden have been found both in Runic and Latin letters, thus making it a comparatively easy matter to read the Runic writings. These runas, as well as the majority of the inscriptions found in Scandinavia, are, however, quite different from older ones found in the country—the latter belonging to a much more remote period. For a long time the earlier runas defied all attempts at deciphering, but during the last few decades a solution of this intricate problem has been found, and what is more, the age of the oldest Runic inscriptions has been proved almost to a certainty. So far, none earlier than from about the year 300 after Christ have been discovered—their date corresponding with the time of the earlier iron age of the peninsula.

EARLIER RUNAS.

ᚠ ᚢ ᚦ ᚨ ᚱ ᚲ ᚷ ᚹ : ᚺ ᚾ ᛁ ᛃ ᛇ ᛈ ᛉ ᛋ : ᛏ ᛒ ᛖ ᛗ ᛚ ᛜ ᛟ ᛞ

f u th a r k g w h n i (j eu(?) p) -r s t b e m l ng o d

LATER RUNAS.

ᚠ ᚢ ᚦ ᚬ ᚱ ᚴ : ᚼ ᚾ ᛁ ᛅ ᛋ : ᛏ ᛒ ᛚ ᛘ ᛦ

f u th o r k h n i a s t b l m -r

Formerly it was believed that the runas were invented by the Germanic nation, without any reference to the alphabets of other South European people. Further researches have, however, proved conclusively that such is not the case. The earlier runas consisted of 24 characters, with signification as shown above. The Runic signs for *th* and *w* probably have expressed the same sounds as these letters in the English alphabet. The sign for *r* occurs at this time only at the ends of words, and it at first represented *s*, but afterwards, as the language changed, its signification became *z*.

By observing the oldest symbols and their meaning, it will immediately be noted that great similarity to the alphabets of the old South European people exists. No one would, for instance, suppose it to be a mere accident that the Runic signs for *r*, *k*, *h*, *i*, *s* and *b* very closely resemble those of the Latin alphabet, and partly, also, those Greek characters having the same signification. In the adaptation of the foreign alphabets, however, the Germanic people exhibited a remarkable independence in giving the letters new names differing from those of the originals, and also in the arrangement of the same. All South European alphabets begin with *a*, *b*, and so on; but the arrangement of runas begins with *f*, *u*, *th*. Another innovation was the division of the alphabet into three groups, each containing eight characters. The earlier Runic writings also differed from most other languages in their being written from the right to the left. On the later inscriptions the writing is, however, done in the manner at present in use, or from left to right.

The later runas differ quite considerably from the earlier ones used during the older iron age, but a careful analysis has shown that this difference arises only from gradual changes in form, and sometimes also in signification. Besides this, also, some have fallen out of use, making the number used during the last centuries of the heathen times in Norway and Sweden, generally called the *later runas*, only sixteen.

A Runic stone at Skåäng, in Södermanland, is remarkable, because, several hundred years after the cutting of the original inscription, the slab had again been used and provided with a

new inscription. The earlier of these (in a line along the middle of the stone) reads "Haringa Hleugar," while the later one (in the sling around the edge of the stone) says, "Skanmals auk Olauf thau letu kiara merki thausi eftir Suain fathur sin Kuth hialbi salu hans;" or, "Skanmals and Olauf (women's names) they let make these memorials after Sven, their father. God help his soul!"

In the implements of the first period of the iron age one sees no trace of Roman civilization, which at that time had not advanced so far North; in the second period this influence is seen, as the objects found bear a close resemblance to theirs; in Norway it was less felt, the finds of money being less numerous. In that country antiquities from the earlier iron age are scarce, and, like those of the stone and bronze ages, are less common than in the two other Scandinavian kingdoms; they have been met with in Norway as far as 69° N.

Burning the dead no doubt was prevalent in the first period of the earlier iron age; and in most of the graves charred bones occur scattered on a bed of charcoal, or buried in a hole, or gathered together under a tumulus: in the last case they had been no doubt put in a wooden vessel; often they are found in earthen or bronze urns, which are frequently surrounded by stones arranged in a square.

THE MIDDLE OF THE IRON AGE.

During the middle of the iron age there must have been an abundance of gold in Sweden, as shown by the great number of ornaments found in different places, and now preserved in the National Museums of Stockholm and Christiania. Byzantine gold coins of this age have been found in Öland. The largest and most valuable treasure ever heard of in Sweden, and perhaps in Europe, is one found in 1774 near Trosa; its weight was twenty-eight pounds, and it consisted of several gold rings, larger and smaller, of a large necklace, in its thickest part the size of a finger, besides several ornaments—probably for swords—the metal of which was remarkably pure, containing 98 per cent. of gold. Of this magnificent find only a small part was saved for the State, the remainder hav-

ing been melted down before the authorities obtained any knowledge of the discovery. Spiral rings have been quite often found in other places, and it is believed that they served as tokens of value, or money.

The most beautiful of all the gold-finds from the heathen era are three large, wide necklaces—at present preserved in

NECKLACE OF GOLD.

the Historical Museum of Stockholm—weighing 1½ to 2 pounds each. They consist of several (three, five, or seven) tubes, lying one above the other, covered with most exquisite filigree and other ornaments; at the back is a joint, and in front the necklace is kept together by the ends of the tubes being entered into each other. One of them was found on the slope of Ålleberg mountain, near Falköping; another, near Möne church, about 17 miles from the former place; the third (shown in the engraving) was found in 1860 at Torslunda, near Färjestaden, on Öland.

CHAPTER XXXI.

THE LATER IRON OR THE VIKING AGE.

The Later Iron or Viking Age.—Sudden Appearance of the Vikings in Western and Southern Europe.—Arms Used by the Vikings.—Peaceful and Warlike Expeditions.—Interesting Inscriptions on Runic Stones.—The Ancient Bridge of Täby.—Bridges with Runic Stones.—Customs and Habits of the Scandinavians in the Latter Part of the Heathen Period.—Modes of Building.—No Chimneys.—Stone Forts.—Remains at Ismanstorp.—Household Utensils.—Mode of Burial during the Viking Time.—A remarkable Runic Stone.—Art of Ship-building among the Norsemen.—Large Fleets.—Runic Stone illustrating Ship's Forms.—Viking Ship found in Southern Norway.—How Vikings were Buried.

FROM about A.D. 700 to A.D. 1060 there appeared on the shores of Western and Southern Europe a people who became the dread of its inhabitants, for they came only for plunder. The fleets of these Northmen controlled the sea, and their power, wherever they went, seemed almost irresistible. After a while they established themselves at many points on the coast they had conquered, and founded kingdoms. At that time society was in a chaotic state, and had not recovered from the darkness which had befallen it after the fall of Rome.

From the French and English chronicles of that period one gets but an imperfect and wrong idea of the character of the Vikings. We must remember that these accounts were written by their sworn enemies—men who did not have the same religion, and who looked upon the victorious Northmen as the embodiment of rapine, cruelty, of everything that was wicked. But the Vikings were not without culture and noble qualities. Brave and daring they were, and when weighing carefully the facts which have come to us, we learn that many of these powerful warriors were endowed with great ability, that they governed well the countries they had conquered, and after battle were—as brave men generally are—imbued with a spirit

of generosity towards their defeated foe. Men often falsify history unawares, when blinded by hatred, prejudice, or bigotry, to suit their own purpose.

About the arms, which once made the Northern Vikings so redoubtable, we get from the numerous finds and the many sagas very good information. From these one sees that their arms were principally the same as during the earlier iron age, and the engravings below show bronze plates with raised figures representing different forms of helmets in use during this period. The arms used were sword, spear, club, bow and arrows, and the much dreaded Viking axe. The spear-points as well as the axes were often inlaid with gold and silver.

BRONZE PLATES, WITH RAISED FIGURES, FOUND IN ÖLAND. THREE-FOURTHS THEIR REAL SIZE.

Bows and arrows were generally used for the hunt, but in sea battles they also played an important part.

Of these weapons the most formidable were the double-edged swords, which, therefore, were highly valued by the Norsemen of old. Their qualities were praised by the Skalds in their songs, and the old sagas tell us how they were passed as heirlooms from father to son for generations, some even being traced back to the possession of the Asagods. Many of them were ornamented with finely executed designs in gold, silver, and bronze. A well preserved one was found a few years ago in Southern Skåne, and is now kept in the museum of the State.

Of the numerous voyages eastward by the Vikings, both for peaceable and warlike purposes, a large number of Runic stones

in different parts of the country bear witness. On one Runic stone in Södermanland is written that it was raised by Sirid to her husband Sven, who often sailed with valuable ships to Semgallen, near Tumisnis. Semgallen is the eastern part of Kurland, on the river Düna, and Tumisnis is Domesness, the most northern point of Kurland. On another, now in a tower of the castle at Gripsholm, the Runic characters read: "Tula lit raisa stain thins at sun sin Havalt bruthur Inkvars. Thair faurn trikilk fiari at Kuli auk austarlar ni Kafu tuu sunarla i Sarklanti" (Tula raised this stone to her son Havald, Ingvar's brother. They went bravely far away to Kul, and farther east in Kafa they died, southward in Särkland [Saracen land]).

RUNIC STONE AT THE NORTH END OF THE BRIDGE AT TÄBY, IN UPLAND.

These Runic stones seem also in reality to belong to the first part of the eleventh century.

There are others which tell us of voyages to Greece. In Eds parish, Upland, is one, the runas on which were cut by one Ragnvald, who in Greece was chieftain of the army. At Fjukeby, not far from Upsala, is another, cut by a father to the memory of his sons, of whom one was chief of the Vikings (*Väringarne*), who went to Greece but died at home. Stones telling of expeditions to Greece are to be found not only in the coast provinces of Upland, Södermanland, and Östergötland, but far away in the country districts. On one of those found in Upland there is an inscription telling of a man who died in Långbardaland (Lombardy), in Northern Italy.

At Täby, north of Stockholm, the country road, up to the present time, leads over an old bridge of stone and gravel,

having its sides lined with several high stones, raised at even distances from each other, and with a number of small ones forming a chain from one end to the other. The large stone at the north end of the bridge has the following inscription: "Jarlabanke had these stones raised for himself while he was yet alive. He built this bridge for his soul's welfare, and he was the owner of the whole of Täby. God save his soul."

The form of these runas, as well as of some others found in the same neighborhood, which likewise bear Jarlabanke's name, shows us that he was living in the eleventh century, rather before than after the middle part. The bridge at Täby has, consequently, been in use about eight centuries.

RUNIC STONE, WITH FIGURES, NEAR LEVEDE, IN GOTLAND.

[The runas are so much obliterated that they cannot be deciphered.]

At other places in Sweden one may yet see the bridges of which Runic stones from the early days of Christianity bear witness. Others have been rebuilt. When the bridge leading over a brook near Kullerstad church, in Östergötland, was being rebuilt, about the year 1850, there was found a fallen and forgotten stone, which was raised up again. Its inscription commences: "Hakun made this bridge, but it shall be called Gunnar's bridge." One stone at Sundby, near Upsala, tells us that Ture had made *sälohus* (quarters) after his wife's death. Such quarters were built on the roadside in the

wilderness, where the tired traveller could not get a roof over his head in any other way.

CUSTOMS, HABITS, AND INDUSTRIES.

The great bulk, perhaps the greatest, of the population of Scandinavia, at the latter part of the heathen time, were living in villages, the most of which even then may have had the same name, and been situated in the same places as at present, or at least until the new divisions of the land broke up those old villages. This may be seen from the marked circumstance that by the side of each village, especially in the provinces around Lake Mälar, are still found the grave-fields where the heathen population of the villages are resting. As the art of burning lime and bricks was probably first introduced in the North at the time of Christianity, the houses of this time were evidently of the same kind as those of which ruins have been found at Björkön or Lake Mälar. These ruins, the oldest known in Sweden, consist of pieces of hardened clay, which retain their forms perfectly, in consequence of the strong heat they were subjected to when the houses were burned. It is by the guide of these that we distinguish between two different kinds of buildings, clay huts and wooden houses in which the joints between the timbers are closed with clay. Ruins of the former kind of buildings show pieces of clay of irregular form, on one side usually smooth, but on the other—the one turned inward—impressions of twigs, generally somewhat more than half an inch thick.

The inner part of these houses consisted generally of one oblong square room, the longer sides of which were rather low, often less than a man's height, and lacking both windows and doors. The entrance was at one end, and was protected by a porch. Where a window was used, it was placed on the roof, which generally had a high pitch, and rested on cross-beams from one long wall to the other. They had no chimneys, only an opening in the roof through which the smoke arose from the fireplace in the middle of the room. The roof was covered with straw, turf, or shingles. The furniture in the houses of the heathen was neither abundant nor

valuable. Benches and bedsteads fastened to the walls, long tables in front of these benches, and a chest or two for keeping the treasures of the family—these were the principal if not all the furniture. Chairs are sometimes spoken of, but not often. Odin quotes thus from the song Havamal—

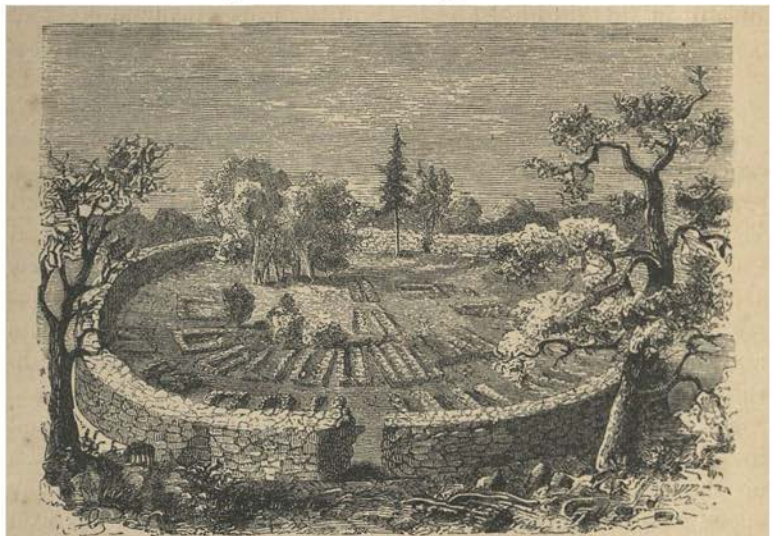
> Gunlöd me gave,
> Upon the golden chair,
> To drink of the costly mead;

and in an Icelandic saga we are told how a man broke into a grave-mound in Norway in the year 1011, and there found Högbon (inhabitant of the mound) sitting on a chair, and under his feet a shrine (casket) filled with gold and silver. Unexpectedly enough, once in a while remnants of cushions from the time of the Vikings have been found. Some years ago such a discovery was made in a grave-mound in the south-eastern part of Norway.

As a protection against and refuge from the attacks and incursions of enemies, probably most of those stone forts seen on the heights in the different provinces were built. They occur in great numbers, especially around the Mälar, as well as on the islands in that lake. The engraving on the following page shows such a fort at Ismanstorp, in Öland. The wall is built of granite boulders and limestone, and is very solid, though no trace of mortar can be seen; its height is about 15 feet, and its width 9 feet at the top where it is not damaged. Several openings lead into the fort, the diameter of which is no less than 400 feet. The foundation walls to numerous houses are still seen inside the fort.

For making fire, flint and steel were used, as is proved by numbers of these found in graves of this age. Of the utensils in use during this period a pretty accurate idea can be formed from those found in numerous graves. Of these, especially, a large number of vessels have been preserved. The cooking utensils were of bronze, clay, stone, or iron. Drinking-vessels were of gold, silver, glass, clay, but more generally of horn. Knives were used, as were also spoons of wood and horn. Furs, skins, woollens, and linen have been

found, and sometimes silk; ornaments of bronze, silver, and gold were also in use. Dice and checkers have been found, and traces of chess figures, showing that this game must have been known during the ninth century, if not before.



FORT AT ISMANSTORP, IN ÖLAND.

The mode of burial during the Viking times is shown by immense numbers of graves of this period; they are found in Norway as far as Lofoden or the main-land. From these it is seen that the corpses were sometimes burned, and sometimes buried unburned. The graves are marked either by mounds or stones in a square, by a three-pointed figure, or by the outlines of a ship—the latter probably being over graves of Vikings. On the tops of the mounds are often seen round stones ornamented with circles or other figures.

Near Björkön, also called Birka, are found many grave-mounds, probably more than in any other place in Scandinavia: the number still visible is about 2100, but many have been destroyed during the centuries that have elapsed. More than 500 of these graves were carefully examined during late years; everything found in them has, as the "black earth"

denotes, shown them to have belonged to the latest part of the pagan era.

A remarkable Runic stone was found at Röks church, in Östergötland. It is the longest Runic inscription found anywhere in the world. The inscription proper reads thus:

"To the memory of Våmod these runas stand;
Them Varen the father cut
After the fallen son.

"I tell of my son, who took double booty twelve times, each from different men. This I tell as the other, how he was surrounded by nine flocks of enemies from far away Rejdgots, and thus he found his death in the battle.

"Formerly the king,
Vikings' courageous
Chieftain, reigned
Over Rejdsea shores.
Armed on the charger
Now sits the generous
King—over the shoulder
The shield is hung.

"This I tell as the twelfth,
How the horse of Valkyrja (the wolf)
Finds fodder widely around on the meadows
Where twenty kings lay fallen.

"This I tell as the thirteenth,
Which twenty kings sat in Zealand
In four winters, with four names,
Sons of four brothers: five of name
Valke, sons of Rådulf; five Rejdulfar,
Sons of Rugulf; five Hågislar, sons of
Härvad; five Gunmundar, sons of
Örn.... I tell of my son, what heroes'
Descendant he is: it is Vilen. He may
Always plough the waves: it is Vilen.
The Viking flees."

The art of ship-building stood high in the North, and the Norsemen's ships were numerous. Snorre Sturlasson says: "King Anund Jakob, in a war with Denmark, had a fleet of upwards of 400 vessels." At other times even greater numbers are spoken of. In the saga about St. Olaf we are told that "Knut the Great (Canute), for his attack on Norway,

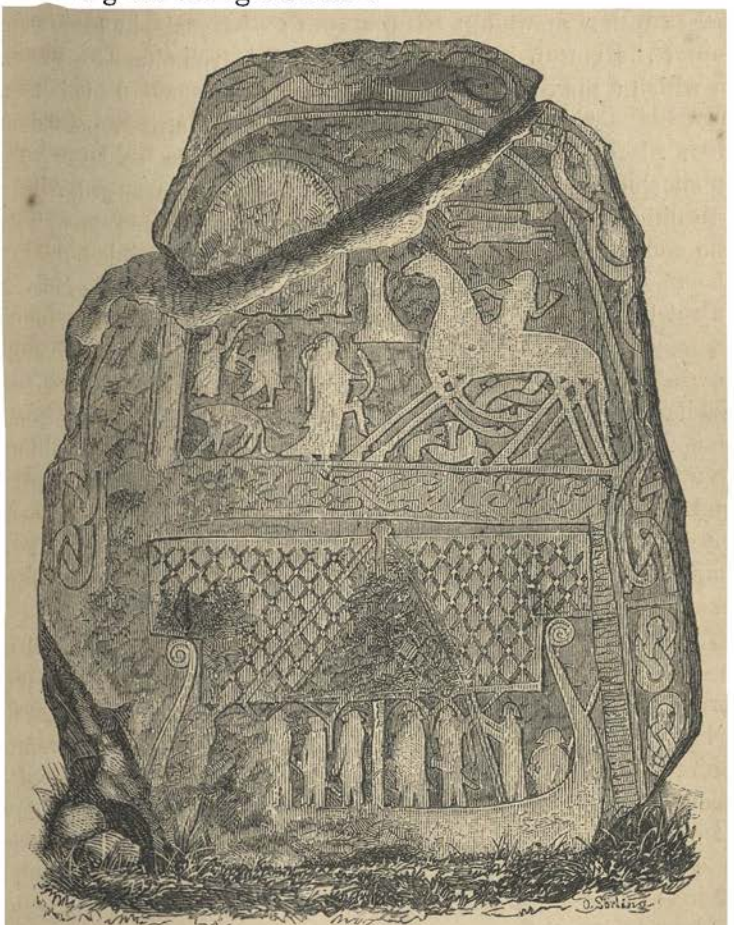
had brought together a fleet of 1440 vessels. These were driven forward partly by the use of sails and partly by oars. On each was generally not more than one mast and one sail. The sails were usually of coarse woollen stuff, and sometimes of silk, with blue, red, and green stripes. The number of oars was often very great, and the size of a ship was known by the number of seats for the rowers. Olaf Tryggvesson's ship, *Ormen Långe* (The Long Serpent), the largest at the time in Norway, had thirty-four pairs of oars, and a crew of nearly 1000 men. Canute the Great owned a *dragon* (a ship with a dragon's head in the stern) which had upwards of sixty pairs of oars."

From the tracings on gravestones and rocks in Scandinavia, and from the finds, one gets an idea of the shape of the vessels that were used in ancient times. In Alskog parish, at Tjängvide, in the southern part of the island of Gotland, there was a Runic stone about five feet high; it is now in the museum at Stockholm. At the base is a dragon-ship with only one mast and one sail. On the deck there is a row of armed men, and above all an eight-footed horse—a representation of Sleipner, the horse of Odin—in front of which are men making offerings. (See engraving on the following page.)

That burial in ships was not uncommon in the North during the Viking age is proved both by the narratives of the sagas and by several finds during recent times. In Sweden, Norway, and Denmark have been discovered mounds, enclosing vessels in which warriors were buried with their weapons and horses.

In the saga of Hakon the Good, Snorre Sturlasson gives an account of a battle which this king, in 954, fought against the sons of Erik Bloodaxe and their mother, Gunhild, in which the latter were defeated. On the side of Hakon fell, among others, Eigil Ullsärk. After having won the battle, King Hakon took those of Erik's sons' vessels which were lying on dry land and caused them to be dragged high up on the shore; he then placed Eigil Ullsärk and all those who had fallen on his side in one of these ships, and buried it in a mound of earth and stones; he also buried his enemies in

other ships. These mounds are still seen south of Frejderbjerg, at the entrance of the Nord fjord. High bautastenar mark the grave of Eigil Ullsärk.



RUNIC STONE AT TJÄNGVIDE.

Near Borre, in the neighborhood of Horten, not far from the Christiania fjord, were found in 1852, in a large mound, the remains of a ship which had been from 50 to 55 feet long; and, in this, burned human bones, skeletons of three horses and of a dog, besides several valuable antiquities. A

tradition says that this mound enclosed the graves of the Vestfold kings, Östen and Halfdan, who flourished at the end of the eighth century.

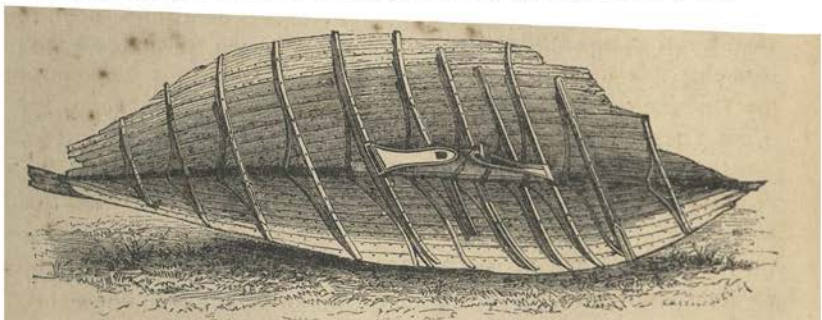
In another mound at Ultuna, south of Upsala, in 1855, were found the rotten but still plainly visible remains of a vessel, in which a man had been buried with his arms and his horses. The bolts which held the planks together still remained in their places. The vessel seems to have been as large as a small sloop. By the side of the corpse lay a sword, with a magnificent hilt of bronze, beautifully ornamented, as well as the remnants of the wooden scabbard and its gilded mountings. Besides these were found a helmet, with crest of silver-inlaid bronze—the only helmet from the heathen time found in Sweden—a shield buckle of bronze-inlaid iron, the handle to the shield, a bundle of arrow-points, mouth-pieces to two bridles, thirty-six checkers, three dice, and parts of two horse skeletons. In the stern of the vessel were lying a broiling-iron, a pot wrought of riveted plates with immovable handle, and bones of swine and geese,—remains from the burial-feast, or the knapsack given to the deceased on his journey to Valhalla. The metal of which these articles were made was iron, except when otherwise specified.

At Nydam, on the coast of Southern Jutland, was found in a swamp, in 1863, a large and fine boat, built of oak, which was propelled by 14 oars on each side. Its length was 80 feet, its width at the broadest part 11 feet; it was very high, and pointed at each end, sinking in the centre to a height of 5 feet, resembling very much the surf-boats of the present day. It was constructed of eleven heavy planks, five on each side, and the other was placed in the bottom, and was cut in such a shape as to form a keel. The timbers overlapped each other, and were riveted together by iron bolts, of which the round heads appeared on the outside, the spaces being calked with a material composed of woollen cloth steeped in pitch. These timbers were joined in a curious manner to the ribs of the boat; at each place where they touched the latter a longitudinal strip was cut out on either side, and a hole bored through the block which was thus formed; a hole was also

bored sideways through the rib in a position corresponding to that in the block, and through these a rope, made of the inner part of the bark of the linden, was passed and securely tied. This gave the boat a high degree of suppleness, which was advantageous in the surf and in heavy seas. At each end was a beam rising to a considerable height above the boat, and to which the ends of the timbers were nailed. Through the upper part of each of these beams there was a large hole, in which, to judge by the way they are worn, probably ropes were passed when the boat was to be dragged ashore. During the Viking times even the larger vessels were drawn upon the land during the winter. Both ends of the boat are so nearly alike that it is difficult to decide which is the stern. The form reminds one in the most forcible manner of the descriptions of the ships of the Suiones given by Tacitus, only a few generations before the building of the Nydam boat, which, according to the Roman coins found in it, must have occurred about 300 years after the Christian era. Tacitus says the ships of the Suiones are unlike those of the Romans, so that, in whatever direction they were rowed, they always had a stem to land with; and they did not carry sails. The boat at Nydam was only intended for rowing, and no traces of any mast have been found; the oars were of the same shape as those now in use, and nearly 12 feet long. On one side of the boat the rudder was found, which is narrower and more like an oar than those of the present day. The rudders of the most ancient period, and far into mediæval times, were fastened on the right side of the stern, and not in its middle as now, which side is yet called starboard (steerboard).

In 1867 was found, in a mound at Tune, in Smaalenene, Norway, a Viking ship, at present in the Christiania Museum. The ship, which had been without deck, is built of oak, the planks being fastened to the frame by wooden bolts. The wood-work is finely done; the keel is one piece of wood, and entirely preserved. The boat is nearly 42 feet long, its width being about 12 feet; its height cannot have exceeded 4 feet 3 inches: both stem and stern are sharply pointed, and exactly alike. As the gunwale is wholly destroyed, the oar-

tholes are wanting, and the number of oars used is uncertain; but the vessel also carried sails, and of the mast, which was of fir, the lower part was still in its place. A little aft of the mast the rudder, resembling an oar, was placed; the appearance of the tiller shows, however, that it was fastened to the vessel on the side. In this ship was laid the unburned corpse of a chieftain, with three horses, swords, spears, shields, etc.



VIKING SHIP FOUND IN A GRAVE-MOUND AT TUNE.

On the shores of the Sande fjord, at the entrance of the Christiania fjord, a still more remarkable find was made in 1880. On the farm of Gökstad is the well-known Kong's Haug (King's Mound). In digging in this place a well-preserved ship from the Viking time was brought to light. Its hull is 76 feet long, and about 14 feet wide amidships; its perpendicular height cannot have much exceeded 5 feet; unlike the above-mentioned Tune boat, which it far exceeds in size, it is very long, narrow, and low. In the middle lies a log, both ends hewn out so as to form a fish's tail; it served to support the mast, of which a part is still standing in its place, while the upper part lies (cut off) in the ship. In and near this were found portions of two or three smaller boats, and also pieces of sails, rigging, oars, the rudder, which had been fastened on the side of the vessel, etc. The gunwales were completely covered with shields, the iron-mountings of which, as well as pieces of the shield-boards, painted in various colors, were preserved. Outside the vessel were the bones of three horses and a dog. When the Vikings lay still with their ships, especially

for the night, it was their custom to erect tents over them for their protection. On this vessel, as the repose of the chief was to last until Ragnarök (the end of time), a burial-chamber of wood had been constructed instead of the tent. This was situated aft of the mast, and formed like the roof of a dwelling. Unfortunately, the pressure of the mass of earth resting above had on one side broken the spars which supported the structure; it was also evident that the chamber had been subject to visitation; some one had dug in, cut open the ship's bottom, and, no doubt, plundered the grave of a large part of its contents; therefore not much was found there, but what there was proved of great interest: scattered unburned bones of the corpse, remains of magnificent clothes, of a stuff crocheted with silk and gold, of bridle and harness, mounted with fine plates of gilt bronze, among which were exceedingly well-worked pieces of great rarity. These finds are of the greatest value, as illustrating the accounts, by the old sagas, of the custom of burying the dead champion in his ship. It was, no doubt, chiefly in vessels like these that the Vikings executed their daring deeds.

REMAINS OF THE VESSEL AS FOUND AT GÖKSTAD.

CHAPTER XXXII.

Fairs in Scandinavia.—Fair in Lærdalsören.—Coming to the Fair by Boats.—A Crowded Place.—Costumes of the Lærdal District.—Articles of Merchandise.—How the People are Lodged at Fairs.—Popular Goods.—Good Times.—Height of the Fair.—A Jolly Crowd.—Love-making.—Accommodations.—Farewell Scenes.

All over Scandinavia fairs are held once or twice a year at places convenient for a great gathering of the people; merchants send goods for these occasions, and houses often are built specially for their accommodation. There are horse and cattle fairs, and others where goods and produce only are sold.

It was September. Numerous boats were pulling towards the land, on their way to the fair which was to take place at Lærdalsören, situated at the head of the Sogne fjord. Both women and men were rowing; but as they approached the shore each boat stopped to give the rowers time to make their toilet before landing. The women were putting on their skirts and bodices over their petticoats, combing their hair, adjusting new caps, or giving the last touch to their dress; for if there is anything as to which the bonde woman is particular, it is that she shall be tidy when she appears in public.

After landing, I found the narrow streets of Lærdalsören crowded with people, including a great number of women; these were clad in their best—the men in dark-blue homespun cloth, with silver buttons on their vests, and a few old men in knee-breeches; the women in high-necked dresses of coarse dark blue or black woollen, the bodices fastened with silver buttons. The married women wore head-dresses characteristic of different districts, and the girls handkerchiefs or little caps.

On gaining the main street, I found myself surrounded by

friends, who welcomed me to Lærdal. The fair was to last three days, and everybody came either to buy or sell—the farmers getting chiefly dried codfish, herring, coarse salt for the cattle, flour, tea, coffee, sugar, etc., for the winter season; the women wearing apparel for themselves and their families.

There are several stores which remain open all the year round, filled with goods sent by the merchants of Bergen for sale on commission. It was a sort of opening of the season at the time of my visit. The new stocks for the year—the so-called latest styles—were exhibited in profusion; and among the articles intended to tempt the buyer were shawls, silk, woollen, and cotton handkerchiefs to wear on the head, cotton goods of different kinds; and a great array of umbrellas; for each woman seemed to take a personal pride in having one of these for her own. One or two jewellers came from Bergen, and their wares were the chief attraction for the women and maidens, and even for the men.

Almost all had brought their own food, stored in oval covered wooden boxes, often gaudily painted. They lodged in the houses around, each room crowded to the utmost—paying for lodgings and coffee, and some for meals, also. My friends introduced me to those who were from districts where I had not been. Soon it seemed as if I knew everybody in the place. One party would join me, and walk with me for awhile; then I would be seized upon and carried off by another group, and thus we met and separated many times during the day.

The buying mania seemed to possess all the good people about, and it finally seized me. I began to purchase right and left—a shawl here, an umbrella or silk handkerchief there—as I was walking with good friends and their daughters or sisters, until we came to a jeweller's stand, and then I was in for it. This was the time to show that I had not forgotten the many kindnesses I had received. My companions crowded around the glass show-cases wherein was displayed an assortment of silver spoons, chains, brooches of patterns to suit the taste of this part of the country, and large quantities of silver rings, many of which were ornamented with little golden hearts, or golden hands clasping each other; but the greatest

attractions were the gold rings. The ambition of a young girl was to possess one of these treasures—a plain gold ring being her chief adornment, to be worn on Sundays or a visit. There were also silver thimbles, some of which were gilded inside, and silver studs—the latter extensively worn by the men and women in this district; the women especially used them, and always managed to show them above their high-necked dresses. Some were set with large red carbuncles. Silver

A PIGE FROM BERGEN STIFT.

watches for the men were sold in considerable quantities. I bought first one thing and then another; this for Brita, and that for Ingeborg, Inger, Sigrid, Dorte, Anne, and at last for Ole, Lars, Mikkel. Here a present given at the fair has a greater value than on an ordinary occasion. I enjoyed the giving of these simple presents, and, like all the rest, I was bent upon having a merry time, and on making my friends happy.

The height of the fair seemed to be at about five P.M., when

people had had their dinner, and all felt happy. On every side invitations to visit were showered upon me. We became more and more friendly as the day advanced, and seven of us swore to be good friends to the end of our lives—and good friends we are, indeed, to this day.

While walking with two girls, friends of mine, a good-natured fellow, who evidently had taken a little more than he ought, made professions of affection to one of them. She said, laughingly, "You know that I do not love you," and recommended him "to go after Berit, for she was the one that he loved." Then she said, confidentially, "Paul, that fellow has made love to Berit for more than a year, and now he wants to make love to some other girl, but I am not to be the one." Similar innocent intimacies of young people of the same hamlet were continually before my eyes. Young men were seen walking with their arms around the waists of girls to whom they were not engaged—the daughter of a neighbor, or the sister of a friend—perhaps the beginning of what was to end in a wedding. Occasionally, however, a girl would send a young fellow off in a manner that showed the strength of her muscle, amidst peals of laughter from all those who witnessed his sudden discomfiture. Most of these farmers' daughters are twice as strong as a young lady from the city.

Towards night many of the men became rather lively, having drank a little too much, but none of the women were similarly affected; they would not have enjoyed the fair unless they had finished the day by being jolly. There was no quarrelling, no coarse language, and no swearing, for the Norwegian bönder do not curse.

At dark, the lamps having been lighted in the stores, the crowd continued to buy. By eight o'clock it was much diminished, and the women had almost entirely disappeared from the streets; and every house in the place, and on all the surrounding farms, was filled with people. The accommodations were restricted, but all were taken care of—three or four girls sleeping in one bed, and many of the men on the floor. At nine o'clock all had retired, and the fair was virtually ended.

In the house where I slept there was a host of my friends the peasants, and my room contained three beds, all of which were occupied, three fellows sleeping in each. A great many people left in the morning, and I felt lonely to see everybody going away. The same feeling that prompted me to be merry with the rest urged me now to depart, and nothing could have induced me to remain a day longer. Had I accepted the invitations I had received from friends, it would have kept me busy for several months.

When just ready to jump on my cariole, a fine lad gave me an old silver watch-chain; one girl came to give me a silver ring, with two gold hands clasping each other, as a token of friendship, while another presented a little carved box, saying, "I have two brothers and sisters in America; the people are kind to them. Take this little box; it is mine by inheritance, and has been in the family for hundreds of years. Take it, Paul, as a *minde* (token of remembrance) from me." And she added, "When you go to America, try to see my brothers and sisters, and say to them that God has taken care of us all; that father is getting old, but that mother is well: tell them never to forget God, and to love him as they did in old Norway."

CHAPTER XXXIII.

A Superb Highway.—Entrance to Lærdal.—The Lysne Portal.—The Defile of Galderne.—Abundance of Salmon.—The Farm of Husum.—Old Roar Halvorsen.—How Family Names are Inherited.—Independence of the People.—How a Farm passes from Father to Son.—A Touching Family Scene.—The Food of Rural Districts.—The Ancient Church of Borgund.—Farewell to Husum and Lærdal.

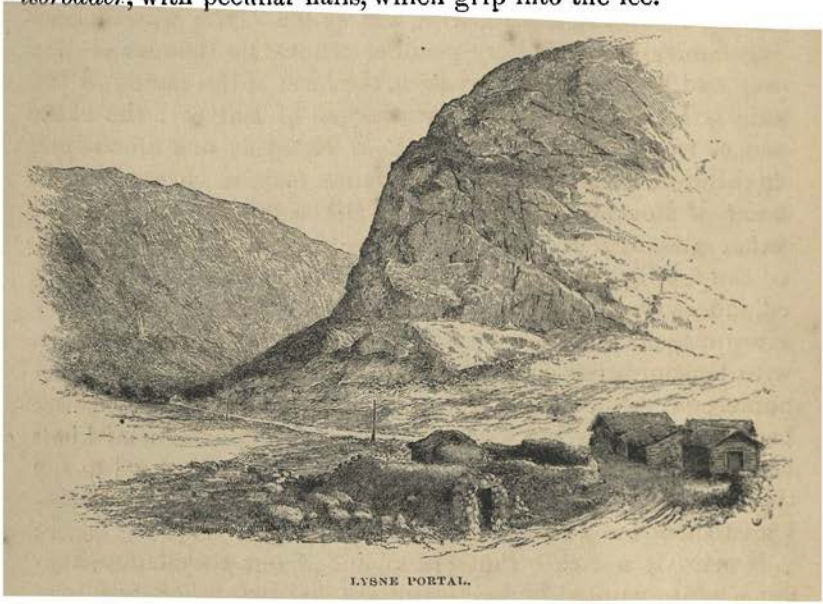
At Lærdalsören (entrance to Lærdal) begins the superb highway which connects the Sogne fjord with the city of Christiania and other parts of the country. There is no other road in Norway, traversing such a long stretch of country, which passes in the midst of such glorious and diversified scenery. One branch goes over the Filefjelds, and then descends into Valders, the other into Hallingdal.

Lærdalsören seems to be the rendezvous for the good-for-nothing fellows of the neighborhood, who in summer are watching for tourists, and who practise upon them all kinds of extortion. Besides, there are several stores licensed to sell spirits, which attract a large class of drunkards. Lærdalsören and Gjövik, on the Mjösen, are perhaps the worst places in Norway; not that they are very bad, but they contrast so much with other quiet hamlets.

Majestic mountains flank the Lærdal Valley at its entrance. A few farms are seen here and there, and some stone huts in the midst of a barren soil. At the Lysne portal the terraces attain a height of five hundred feet.

Beyond Lysne the valley becomes narrow and the scenery wilder. Straggling farms are passed, whose dark buildings, with their earth-covered roofs, are in unison with the sombre landscape. Farther up, the Lærdal seems to be closed by mountains, and one reaches the narrow defile of Galderne. Here the old road, by far the more picturesque, ascends a very steep hill, from which is a fine view of the lower part

of the gorge. The new one, blasted in many places out of the rocks, runs at the base of the hills by the river-side. On the right bank of the stream are remains of a still older highway. How difficult it is in winter to descend the hills by the narrow paths that lead from them, when ice covers the rocks and bars the way in many places, I know from experience. For safety, one must attach to the shoe a special heel called *isbrodder*, with peculiar nails, which grip into the ice.



LYSNE PORTAL.

The river here foams in its rocky bed, and a fall prevents the salmon from ascending higher. In the deep pool at its base I counted twenty-three lying motionless on the gravelly and sandy bottom.

The salmon make their appearance in the rivers of Southern Norway in May, and in the north in June. They commence breeding in the latter part of September and up to November, and remain in the streams till December. They spawn in the beds of the pools, the eggs being hatched in sixty to ninety days. When four months old they are four or five inches long; they do not attain their full size until

the age of six years. The greatest enemies of the full-grown fish are the seal and otter; of the young ones, the duck and gull, and, in the Baltic, the pike.

Beyond this pass the valley widens, containing several farms. I alighted at one called Husum, and was welcomed by old Roar Halvorsen and his family, which consisted of Roar Roarsen, his eldest son, Haagen, Iver, Halvor, and Pehr, and two daughters, Sönneva, married to the owner of a neighboring farm, and Sigrid, who was single. The way of keeping family names is very peculiar among the bönder of Norway and Sweden. For instance, the head of the family of Husum is Roar Halvorsen (Roar, the son of Halvor); the eldest son, as we have seen, is called Roar Roarsen; and all the other children, whatever their first names may be, have added the name of Roarsen or Roar's datter; then the eldest grandson's name goes back to that of the grandfather, and by this method the family name is preserved for generations. Good-hearted, indeed, was old Roar, and many a pleasant chat and many a warm welcome have I had in his house. My acquaintance with Husum began curiously. Approaching the farm, I noticed numerous vehicles in the yard; people were busy packing bedding, crockery, etc.; others were carrying away chairs and benches. A *begravelse* (a kind of wake) had taken place, for the wife of the owner had been buried three days before. I mistook it for a wedding-feast.

Husum is a comfortable farm, and also a post-station, having a white-painted house for guests, and two other dwellings for the family. It is a good place, but expensive to work, for much of the grass has to be collected on the abrupt and rugged sides of the hills overhanging the valley. During harvest time the people wear soft shoes without soles, in which their feet can better accommodate themselves to the inequalities of the ground.

The rural population is very independent. If girls accept situations, it is because the farms of their parents are too small to support a large family, and some of them desire to make a little money; it is quite common for them to take service for a season, and then return to the homestead. One reason why

servants are treated with such kindness is that they generally belong to the same district or parish, where all the people know each other, and where all the children go to school together. Nothing is put under lock and key, and any indication of distrust of the integrity of the dependents would be resented at once; indelible disgrace is attached to any dishonest act. This conscientiousness of servants impressed me during my travels in the country; it is probably due to the patriarchal customs under which they live. They are often the friends or relatives of the family in which they serve, and every member of the household performs a share of the work.

The wonder at the independent and manly character of the rural population of Scandinavia ceases when we consider the large number of owners of the soil. The Swedish law recognizes no limit for the division of the land, except that no farm must exist that does not support at least three able-bodied persons.

The number of farms in Sweden amount to 258,650.

Under 5 acres	65,000
Between 5 and 50 acres	165,000
" 50 " 250 "	26,000
Over 250 acres	2,650

The number of domestic animals are—horses, 455,900; cattle, 2,181,400; sheep, 1,695,400; goats, 121,800; swine, 421,800.

We see, therefore, that there is a farm for every seventeen inhabitants; a head of cattle for every two, and one horse for every ten persons.

The number of farms in Norway in 1865 was 147,000, of which 131,800 were cultivated by their owners, while the remainder were rented; being one for every twelve persons. Of domestic animals there were kept, in the above year—horses, 149,167; cattle, 953,036; sheep, 1,705,394; goats, 290,985; swine, 96,166.

In Lærdal and Voss, and in some parts of Norway, the young people often prefer to sleep in winter in the cow-house, in which, upon a platform raised a few feet above the floor, and accessible by a ladder, may be found one or more beds.

Generally the place is kept scrupulously clean, and looks almost like a bedroom. There is usually a window or two to allow a circulation of air during the day, and prevent dampness. I must confess that sometimes I was fond of spending a night in such a room, in which the temperature is even, and not unhealthy.

On my visit to Husum an important event took place, when, according to immemorial custom, the farm was to come into the possession of the eldest son. The dinner being ready, all the members of the family came in and seated themselves around the board, the father taking, as is customary, the head of the table. I noticed an unusual air of soberness on the faces of those present, though the people are generally sedate at meals. All at once Roar, who was not seated, came to his father and said, "Father, you are getting old; let me take your place." "Oh no, my son," was the answer, "I am not too old to work; it is not yet time; wait awhile." Then, with an entreating look, Roar said, "Oh, father, all your children and myself are often sorry to see you look so tired when the day's labor is over; the work of the farm is too much for you; it is time for you to rest, and do nothing. Rest in your old age. Oh, let me take your place at the head of the table."

All the faces were now extremely sober, and tears were seen in many eyes. "Not yet, my son." "Oh yes, father." Then said the whole family, "Now it is time for you to rest."

It was hard for the sturdy old bonde, who had been chief so long, to give up; but he rose, and Roar took his place, and was then the master. His father henceforth would have nothing to do, was to live in a comfortable house, and to receive yearly a stipulated amount of grain or flour, potatoes, milk, cheese, butter, meat, etc.

Roar, the eldest son, is a good friend of mine; intelligent, a subscriber to several newspapers, kind-hearted, and an excellent husband. Sigrid, his wife, is industrious, always busy attending to her numerous household duties; these in summer, when many travellers stop, either for the night or for a meal, are by no means light.

Almost every large Norwegian or Swedish farm has a num-

ber of *plads* or *torp*, small places, with houses and some good land attached, which are rented on certain conditions. The Norwegians call the men who have these *husmænd*, the Swedes *torpare*. They have to pay a stipulated sum yearly, or most generally have to work a number of days in the year, as payment for lodgings and the land cultivated, the products of which belong to them.

With the month of October comes the slaughtering time. The housewife then has a great deal to do in preparing sausages and bacon to last until the following autumn. Meat has to be salted, dried, or smoked.* *Mölja*, made of blood mixed with flour, is put up in large quantities, preserved either in bladders or in cakes; when used, it is either boiled or fried.

The Norwegians have several kinds of bread. *Fladbröd* is made from an unfermented dough of barley and oat-meal, often mixed with pea-flour. The dough is rolled into large circular loaves, having a diameter of two to three feet, and of a thickness of heavy paper or thin pasteboard, and is then baked over a slow fire on an iron plate. In the dough are often kneaded boiled potatoes. This bread will keep for a year or more. It is much thinner than the Swedish bread, and is brittle. *Lefse* is made in the same manner as the fladbröd, but is only half baked, and is then folded together, generally four times. The fladbröd is kept in the larder in large cylindrical heaps, often for half a year and longer; the lefse, with its convenient form, is used on journeys.

Gröd (porridge) is the daily dish of the Norwegian peasant. It is made from barley-meal, although oat-meal and sometimes also rye-meal are used. After the gröd has been taken from the fire and has ceased boiling, more meal is sometimes added to give it greater consistency; it is then called *nævergraut*, and is used on journeys, or when the peasants are at work at some distance from the farm. The gröd is generally eaten with skimmed milk, which is preferred after it has become sour. Potatoes are a great staple of food; they thrive well, and are

* *Spegekjöd* is made by slightly salting and then drying the meat—generally legs or shoulders of mutton.

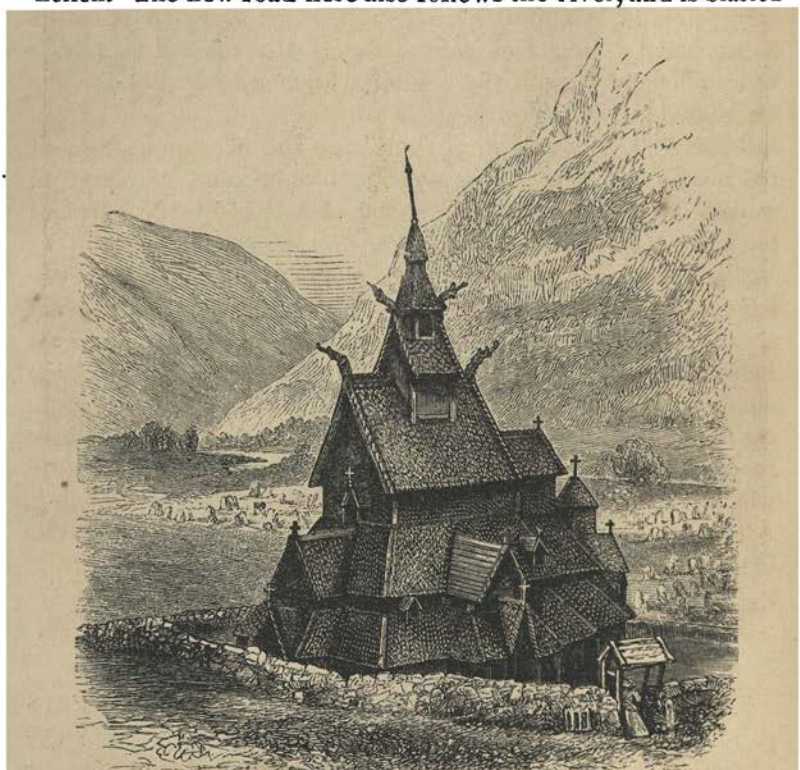
of good quality; the people well know how to cook them. Fish is used extensively; salt herring is eaten with potatoes, as also is dried codfish, soaked the night before it is cooked. On the coast fresh fish is largely consumed.

MAKING FLAT BREAD.

Butter and cheese are much used as food. There are three peculiar kinds of cheese: 1. The *mysost* is made from the whey remaining from the common cheese, boiled till the water is evaporated; then it is shaped into square cakes, weighing from two to five pounds; the color is dark brown. It must stand at least a day before it is fit to be eaten. It is made only at the sæters, where wood is plentiful, for it requires a great deal of fuel. It is eaten in thin slices, and with bread and butter; women and children are especially fond of it.

The best is from goat's milk. It can hardly be called a cheese, as it consists chiefly of sugar of milk. 2. The *gammelost*, made from sour skimmed milk, is a fermented round cheese, which is kept for months in the cellar. 3. *Pultost* is also a fermented cheese, mixed with caraway-seeds, not formed into cakes, but preserved in wooden tubs.

A short distance above Husum is another fine defile, Vindhellen. The new road here also follows the river, and is blasted



BORGUND CHURCH.

in several places from the rocks. Beyond Vindhellen the valley widens again, and one comes in sight of several farms and the old stave church of Borgund, one of the most interesting in Norway. This curious church, and that of Hitterdal, belong

to the oldest style of ecclesiastical architecture in the country; that of Borgund dates probably from the time of St. Olaf or his son, Magnus. Its dark color and peculiar shape attract at once the attention of the stranger. Its steeple is surmounted by a cock, and the shingled roofs are ornamented with dragons' heads and crosses. A low, open gallery on the ground protects one part of the edifice, and its entrances are covered by porches. The small interior, with its curious carvings and arrangements, is almost as odd as the exterior. A space of about twenty-four feet square forms the main area, and is surrounded by ten pillars, behind which are benches for the congregation. The only stone object is the ancient baptismal font. The new church, built for the accommodation of the people — for the congregation has become too large to worship in the old one—is so near that it spoils the effect of the latter.

The days passed pleasantly in Lærdal with its kindly inhabitants, among whom were a number of good friends who were always glad to see me, and with whom I sometimes correspond. Before leaving Husum, Roar's wife presented me with some underclothing, woven at home, of white vadmal, saying, "Paul, the weather is cold in Norway in winter, and I have made these for you to wear;" at the same time giving me a photograph in which herself, her husband, and the children were represented. After a cheering good-bye, and promises that we would write to each other, I left Husum, and continued my journey.

CHAPTER XXXIV.

The Farm of Nystuen.—A House of Refuge.—Life at Nystuen.—Descent into Valders.—Valders Costume.—Hospitality in Vang.—Etiquette among the Bönder.—Character of the Norwegian Bonde.—Cleverness of the Bönder.—Sacred Rites of Hospitality.—How I came to Vang.—A Storthingsmand.—The Church of Vang.—A Model Clergyman.—Labors of the Parish Pastor.—Haugen Farm.—How Guests are treated.—Birth of a Child at Haugen.—Nertröst Farm.—A Christening.—Dancing in Valders.—Bachelor Friends.

At a distance of twenty-four miles from the church of Borgund, after a romantic drive, I came to the mountain farm and post-station of Nystuen, situated on the lonely shores of the Utrovand, 3162 feet above the level of the sea, and near the highest point on the route. Welcome, indeed, is the place in winter, when, cold and hungry, the traveller reaches its hospitable roof, and gets a hearty meal, a glass of wine, an excellent cup of coffee, and a very comfortable bed. At this time of the year the crowd of tourists has disappeared, and one may enjoy from the windows of his warm room the frozen lake and wintry landscape, with its cloudless sky by day and its twinkling stars by night; or he may, perchance, watch a driving snow-storm, and congratulate himself on his pleasant quarters; or listen to the whistling winds, which at times make the houses tremble, and which might overthrow them were they not built parallel to the valley and the course of the tempest.

The summers here are very short; grain cannot ripen, though grass is abundant, and there is grazing-land enough for pasturage, and a crop of hay for winter use of many cows and horses. Their long and severe winters are not lonely, for, as a rule, the people in such out-of-the-way places have large families, and their children and grandchildren make quite a colony. Old Knut Nystuen was the progenitor of a large

number of descendants. He has now given up the station to his son, and occupies with his worthy spouse a house in which there are some rooms up-stairs for guests.

They have their enjoyments, and idleness is unknown. The females weave, spin, and knit; the men fish and hunt, and attend to the farm-work, getting the wood and hay sometimes from long distances.

From Nystuen the road eastward descends rapidly into Valders, in the midst of a gloomy scenery, enlivened by the river and birch-clad woods, and a few farms. At a distance of about nine miles the head of Vangs Mjösen is reached, 1494 feet above the sea. Sombre indeed is the landscape which encircles its water.

There are few parishes in Scandinavia so pleasantly remembered by me as that of Vang. The farms Opdal, Tune, Nertröst, Kvale, Haugen, Ellingsbö, Bö, Söyne, Kattevold, Baggethun, Kvam, Lene, Sparstad, Nordland, and others will never be forgotten. Each farm in Scandinavia has its name; sometimes these have been divided either by inheritance or other causes, and each owner builds a home on his part, but all bear the same title. Where the soil is good there may be a number at short distances from each other connected by rough, narrow roads, passable by carts.

Valders is one of the most romantic inland districts of Norway. The ever-changing panorama, which in the north is weird, becomes more cheerful as one descends into Slidre and Aurdal; in the latter some of the views are exquisite, especially when the road passes the eastern slope of the Tonsaasen by a gradual ascent of over seven miles. The northern part of Valders is poor, for, as in many other parts of Norway, stones are plentiful, good soil scarce, and families large; but the mountain pastures are rich, and the inhabitants derive a modest revenue from the produce of their dairies. Whenever I came to Vang, the only thing that troubled me was to decide at which farm I should stop first, for I did not want to give cause for jealousy; therefore, that they might feel that I loved them all, I had to make each a visit.

Many are the pleasant weeks I have spent in this Arcadian

spot, where the people seemed to vie with each other as to who should render their friend Paul most happy; nothing was ever too good for him. No matter at what time he came, day or night, he was always welcome; the best of their cheer was put before him. I could not make a short visit anywhere, and be allowed to depart without taking a draught of milk, a cup of coffee, a little dram of bränvin, or eating something. It was impossible to decline; and many a time, unknown to these good people, did I feel unwell from too much of their delicious coffee—sometimes drinking ten or fifteen cups a day with as many meals.

The stiff leather knee breeches are getting out of fashion, and the costume consists of a vadmal suit—a jacket, waistcoat with silver buttons, and pantaloons. The fashionable parts of the toilet are the woollen scarf and the round felt hat, the latter being worn in the house or at the dance, under the idea that it is nobby. The women wear the usual vadmal dresses, or others of lighter material, and a colored kerchief on their heads.

One of the peculiarities of the Norwegian farmer is that etiquette demands that a friend when visiting him shall ignore that the preparations made on his arrival are on his account. The guest has no sooner seated himself than coffee is roasted, the coffee-pot put on the fire, and food prepared. When he sees that everything is nearly ready, he gets up and says, "Good-bye;" upon which he is entreated to remain, and, after a little resistance on his part, is led up-stairs or into the next room. The coffee-cups are always filled to overflowing, for otherwise it would appear stingy.

Another custom that amused me greatly is when milk or bränvin is offered; the guest at first refuses, saying, "Do not waste it on me." The host insists on his drinking; then the guest sips, and returns the bowl or glass, saying, "It is too much." Another remonstrance takes place, and then, the third time, he swallows the contents of the glass.

The Norwegian bonde is manly, self-possessed, and brave. Beneath his rough exterior he has a most kindly heart; outwardly cold, but easily moved to the other extreme, kind to

his family, and merciful to his beast, he must be known to be appreciated. He is truly and honestly pious; his religious feelings are deep, and have been cultivated from his earliest boyhood. In rare instances fanaticism may blind his better nature and make of him a bigot.

In the character of both men and women is a vein of quietness and pensiveness—the result, no doubt, of the stern nature that surrounds them. Parents are kind and gentle to their children, and I cannot recall an instance when I heard coarse language used to them or saw them beaten. Members of families are affectionate to each other, although they are reserved. Quarrels are very rare; even on the commonest farm I have never witnessed scenes of violence between husband and wife.

The farmers are very clever at all kinds of handicraft. When one wants to build a house, or make any addition to his farm, he goes to the forest and cuts the trees, and is his own carpenter. He may also be a tanner, harness-maker, blacksmith, shoemaker, and miller; along the coast he can build boats and ships, and is an expert fisherman; he is also a maker of musical instruments and furniture, a goldsmith and jeweller. As a hunter in the mountains, he pursues the bear, the wild reindeer, or the ptarmigan.

There is no country in Europe where the rites of hospitality are held more sacred than among the Scandinavians. The traveller is surprised and delighted to see everywhere this beautiful trait in the character of the people. Even the poor are never allowed to depart from a house without being offered something to eat, and in such a manner as not to hurt their feeling of pride. The stranger all over the country is reminded of these words of the elder Edda:

> The one who comes as a guest
> Needs water, a towel, and hospitality;
> A friendly disposition let him experience;
> Talk and answer let him get.

The way I came to Vang for the first time happened in this manner. I was travelling on one of the steamers plying between Bergen and the Sogne fjord. As usual, I had made myself one of the people, chatting with the bönder. While

at dinner with several of them I noticed a man watching us, with now and then a contented smile passing over his face. As I learned afterwards from him, he was delighted to see a stranger so free, and apparently so happy in the society of people who were, like himself, bönder. At the dessert he came and inquired if I was not Paul Du Chaillu; and, on an affirmative answer, said his name was Nils Tune, from Vang, in Valders; that he was a member of the Storthing, and added that I would be welcome at his farm. He understood that I came to study the home life of the Scandinavians: he said that he would introduce me to his neighbors, and that he had no doubt that I would like the people of Valders. I accepted his invitation, and, soon after my arrival, I found that he had spoken well of me. Wherever I went, I received from the first a kind reception.

Nils Tune had been elected to the Storthing by the people of Valders. In Norway the rural constituencies are the liberals, and those of the cities the conservatives. There is no doubt that a bitter feeling exists between the two. This I gathered in conversation with the bönder, many of whom believe that they are despised by the Herrer. I always tried, when they said so to me, to make them think they were mistaken, but it was of no avail. One day Nils, when speaking on the subject, said, with eyes flaming with anger, "Yes, Paul, many people in the cities believe that we are no better than cattle." Upon which I remonstrated, and mentioned gentlemen in Christiania who he knew did not despise the bönder.

Between the high-road and Vangs-mjösen is the old wooden church, and near it the parsonage, the latter with large, comfortable buildings. A whole-souled man was Prest Konow. So generous was he to the poor of his parish that the farm belonging to the living of the church could not support him and his family. Happily he had a rich father in Bergen, who now and then sent him money, and which was no sooner received than a great part of it was spent in relieving the distress of the poor. He gave in a quiet way—following, in this respect, the principle of the religion he professed; but now

and then an over-grateful man with a large family, or a poor widow, could not refrain from telling me what the good pastor had done for them, repenting afterwards for their weakness, knowing that they would be scolded for having told of the kind deed which had been done in secret. It is no sinecure to be a clergyman in some of the districts of Norway, either inland or by the sea. Some of the parishes are very extensive, and occupy an almost uninhabited country; the hamlets being far apart, of course they cannot support a pastor for each church. Chapels, therefore, are often built at a great distance from the parish church, and can only be reached by bridle-paths or narrow mountain-roads. A schedule of time for the year designates the date of service in each place; and in sunshine, rain or snow, the clergyman, on horseback or in his cariole, must reach the church—wet, overcome by the heat, or possibly half frozen. It is no unusual thing for one pastor to have under his charge three or four churches, and services are held in them only once in three or four weeks, and sometimes not more than four times a year. When the churches are in the neighborhood of a fjord he has to go in a boat, often in very stormy weather. The Norwegian clergymen are thoroughly educated; many of them speak one or two foreign languages, one of which is usually English. They are hospitable and kind-hearted; and in many poor districts they are the only examples of a higher civilization, the parsonage being the place where cleanliness can be learned. There is no class in which black sheep cannot be found; but, as a rule, the Scandinavian clergy are loved and respected.

The worthy pastor of Vang was a staunch conservative, and did not agree well with the radical Storthingsman, Nils Tune, who was most advanced in his politics, and advocated progress and the abolition of laws which he thought were obsolete, or ought to be repealed, some of these affecting the privileges of the Lutheran Church.

My visits to the parsonage were most enjoyable, but the generous man many times would have had me stay longer; he could not understand how I could rough it among the farmers, and partake of their fare. Among my many friends

were the people of Haugen and Nertröst. The dwelling-house at Haugen had an upper story, reached from the porch by a steep ladder-like staircase, consisting of a large and two small rooms. This part of the building was, as is always the case, scrupulously clean, and reserved for the use of guests. The lower story was arranged in the same manner, with the exception that one of the small rooms was a kitchen, with an open fireplace in one corner. The large rooms down and up stairs were heated by stoves, which are used extensively in Vang, for birch-trees are scarce. Thomas Thomasson and his wife, Guri, could never do enough for me; and his dear old father, whose kind heart and honesty could be read in his face, thought that there was nothing too good for me in Vang. Three children, a maid and a man servant, completed the household. Adjoining the house was a little garden, with currant-bushes and a few patches of turnips.

It is the custom that the guest shall eat alone. In the room used on such occasions the table is set with a fine white cloth, and silver forks and spoons; after the meal is served, the wife, who waits upon him, leaves him alone, coming once or twice during the repast to urge him to eat more. For one intending to spend a few years in Scandinavia, the prospect of this solitary way of eating was not very cheerful; so, on coming to a farm, after allowing a day or two for such ceremonious proceedings, I invariably insisted on breaking this rule, and eating on the plain board with the family and farm hands, to the great dismay of the matron of the house. When this point had been gained, there were others almost as difficult to obtain—that of making them give up the silver spoon put before me for a wooden one, as used by the family. Farmers take great pride in such rude spoons, each member of the family having his own, with his or her initials cut on the handle. The next was that I should be allowed to take a piece of flat bread instead of a plate, if these were not used; to put my spoon into the large dish of gröt like the others, and to help myself to the sour milk in the same manner. When the latter was too sour, the wife always insisted that I should have sweet milk, and this I did not refuse.

One night at Haugen, while in profound slumber, I found myself suddenly awakened by a rather rough shaking, and, opening my eyes, I saw friend Thomas with a candle in one hand and a bottle, with two small glasses, in the other. "Paul," said he, "you may have heard my wife cry out a little while ago; she has just given birth to a fine infant." Without saying another word, he put the candle on the table, and, filling two small glasses, added, "Let us celebrate the event, and you must empty the glass;" to refuse would have been the height of impropriety, and have shown a great lack of friendship; so I wished long life to the new-born, and speedy recovery to the wife.

It is the custom on the birth of a child for the wife of every neighbor to cook a dish of *flödegröd* (this is porridge, cooked with cream instead of milk, or a rice pudding), and bring it to the convalescent; there is a good deal of rivalry among the matrons, who try to outdo each other in the quality and size of the dish.

Nertröst was one of the best farms in Vang. There were two houses, one of which was for guests, and for keeping the clothes of the family. John Nertröst was a good-looking fellow, a fine specimen of a Valders man, kind, upright, and active. His wife, Sigrid, daughter of a bonde living a few miles down the valley, was a pattern house-keeper, and, like her husband, loved me. They could never do enough for me; the sheepskins on my bed were clean and white, and soft as down; they are excellent protectors against rheumatism, of which I never had the slightest symptoms. No matter how short were my walks, I must be hungry on my return. Early in the morning a cup of coffee was brought to me while in bed. Any time I required a horse it was ready; if I wanted to go anywhere, good John was always willing to take me.

One day there was a christening at Nertröst, as there had been an increase in the family. This was followed by a feast; and I had been especially requested several days before not to go visiting far away, for I must be on hand. The pastor and his wife on such occasions are always invited, also members of the respective families and friends. A pleasant time we had

of it; the best crockery, and the silver forks and spoons were brought out; meat, cakes, and puddings were abundant.

The people of Valders are great dancers, and expert in the *Halling*, the great feat of which consists in now and then touching with one foot the ceiling, which is, as a rule, nine feet from the floor. One of the most characteristic national dances is the spring dance, a part of which is for the girl to hold the end of the uplifted fingers of her partner and then pirouette around with such rapidity that her dress becomes inflated like a balloon, rising sometimes to the knees, when, by a dexterous motion of her hand, she brings her skirt down. When one goes to a party he must make up his mind to perspire freely even without dancing. The lower room is used as the dancing-hall, which is always crowded to suffocation, for there is a general invitation. All the young folks, and even old, enjoy the fun. A lamp raised above danger of contact dimly lights the place; chairs, table, and benches have been taken away; the fiddler stands in a corner. After awhile, in order to urge him to play with more zest, the company put in his hat a few coppers, and then another dance takes place. The crowd is generally so great that there is hardly space to move, and the atmosphere becomes so intolerable that the room has to be partially cleared. The boys sometimes hide a bottle of bränvin, and invite their friends to have a drink on the sly. The festivities ordinarily last till the early hours of morning.

Among my best bachelor friends were Ole, Lars, and John. When in Vang, the good fellows would have felt unhappy if they had passed a day without meeting me. They were determined that Paul should not spend a lonely day in their hamlet, and were always making plans for my entertainment—at one time a dinner, or a girls' or boys' supper was given at their own farm for me, or they caused their relatives to invite me to their houses. Sometimes we would row over to the other side of the lake, spend a day or two, and have a good time among their friends, who always prepared a feast for me. The three even went so far as to bother the clergyman a whole winter, simply because they wished to speak to me in English on my return the following year.

Sorrow found its way into the hamlet of Vang, and a day of mourning came to its people, for death had laid his cold hand upon an old and much-respected widow of the place.

Funerals as well as weddings are generally appointed for Sunday. It is the custom to keep the body for a number of days before interment. As the time for the performance of the last sacred rites approached, preparations were made at the farm of the deceased by her eldest son for entertaining the mourners and invited guests during the begravelse, which was to last three days, on a scale commensurate with the station and wealth of the family.

The day before the burial, relatives and those who lived far away arrived; the utmost decorum prevailed, and food was eaten in silence. Those who are invited usually bring or send contributions of provisions; and, as the crockery and utensils of the household are not sufficient on such an occasion, the neighbors lend theirs. On the morning of the funeral the house was crowded with people; every one had a solemn face, and their conversation was in a low whisper. When the hour of departure arrived, all took a last look at the deceased; then the coffin (of plain boards) was nailed, and put on a sledge, though there was no snow on the ground; over it was spread a fine home-woven woollen covering. Numerous vehicles followed in procession, as the farmers always ride on such an occasion as a mark of respect. On reaching the church-yard, which was about half a mile distant, the clergyman was in waiting; he read the burial-service, and threw three shovelfuls of earth over the coffin, which was then lowered into the grave, each one present throwing some earth upon it; the pit was then filled in the midst of deep silence.

All then returned to the house, which in the mean time had undergone a complete transformation; long tables, with white table-cloths, were set, loaded with eatables. First, the male portion of the guests were invited to take a little bränvin; a blessing was asked as the guests stood before their respective seats, after which the repast began. Long before dark many of the company were hilarious, for they had drank much. Everything was as plentiful as at a joyful feast, and many had

no sleep. The next day was passed in eating and drinking, and a stranger might have thought that it was a wedding festival instead of a begravelse.

One good farmer suggested that in America we must have a grand time on such occasions, as the people are so rich. When I told him that we ate or drank nothing, but went directly home after the burial, he said, "Do I understand that they are so stingy in your country?" The idea of people going to a funeral, and having nothing there to eat or drink, struck him as savoring of meanness, and he turned his back on me in disgust.

Vivid, indeed, is the remembrance of my last visit to Vang, and especially of the two days preceding my departure. I had to see all my friends, even across the lake, and to eat wherever I made a call. On the last evening I was perfectly exhausted, for I had partaken of thirty meals in two days, and drank thirty-four large cups of coffee, and I had to skål many times besides. There was no escape; I had eaten with their neighbors, why should I not do the same with them? Was I not to go on my journey across the Atlantic? Would it not be a long time before they would see me again?

As I took leave, the mother or daughters would hand me a pair of woollen stockings, gloves, mittens, or cuffs, and say, "Paul, we have made these for you—keep them to remember us by;" often my initials or their own were embroidered upon them. Others would give me a silver ring, brooch, or other little token of friendship. Some old matrons were more practical, saying, "Paul, take this cheese and sausage." Expostulation was vain; the answer was, "America is far away, and you may be hungry on the road."

I was touched deeply by the feelings of sorrow caused by my departure. I could see tears in their eyes, and sad faces spoke more than words. "Paul," many would say, "do not forget us; write to us from America. You shall always be most welcome;" whispering the parting words, "God be with you over the wide ocean," as they pressed my hands. When I left the hamlet John was not at home, but Ole and Lars accompanied me for some distance with almost silent sadness.

It is now many months since I have heard from Vang. One thing or another has prevented my writing; but the dear friends I have there are often remembered; their kindly faces are still before me, and their cheers of welcome ring yet in my ears. The memory of the happy days spent in their midst will always be cherished. Manly lads and fair maidens have wedded, bashful young girls have become comely damsels; the wheel of time has brought many changes, both happy and sorrowful. The good länsman Wangensten, of Kvam, is dead; most touching was the last letter to me which he dictated to his son, when he had hardly strength to sign his name. Uncomplainingly he spoke of his sufferings and approaching end, and added, "Though I shall be missing when you return to Vang, do not fail to come to Kvam; you will be welcomed by my family." Nils Tune has also gone, and over his grave the rancor of political strife has been forgotten and forgiven: he was honest and incorruptible.

Dearly do I love to read the letters from my friends of Vang. Husbands, wives, daughters, and sons write to me affectionately, and none are more appreciated than the letters of the children. Sigrid Nertröst, the wife of John, writes, "Little Berit (their daughter) cries because she cannot write to Paul." Little Anna Haugen, in a letter of her father, sends a tiny heart and a ring made of glass pearls. Ole, who has since been married, writes, "During Christmas we have had many gatherings, drank toasts to our friend Paul, and John has composed two verses which we sang." These I give:

Now at Christmas there is joy
In the North, as in the South,
At the Christmas-tree and board.
Here the toast to Paul is drained
To the bottom, in northern custom.

A toast for Paul Du Chaillu:
Give him a loving maiden,
That his life may flourish finely;
A happy New-year as we close,
Certainly we wish for that—
Lars, Ole, John, and all, young and old.

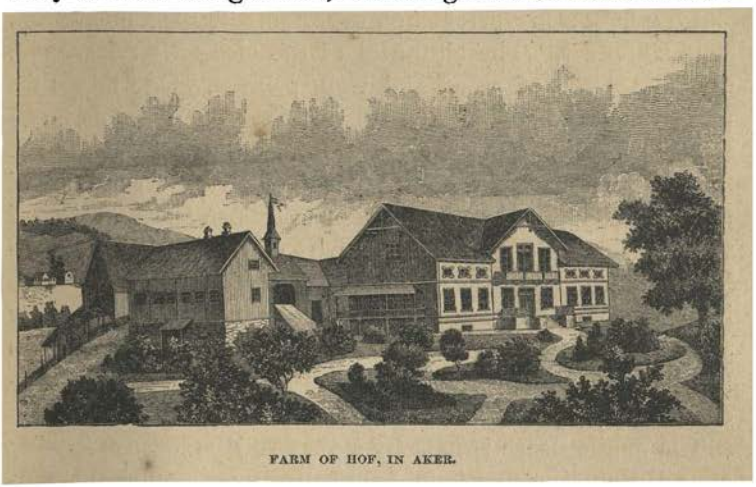
CHAPTER XXXV.

Southern Norway.—A Long Highway.—The Farming Population.—Fine Farms.—Comfortable Houses.—Cities of Norway.—How the Public Peace is kept.—Pious Excursionists.—A Judge's Home.—Taking an Oath.—Sætersdal.—A Tall People.—Costume in Sætersdal.—Old Stabburs in Osse.—Character of the People of Sætersdal.—Valle.—Paul Paulsen.

NORWAY at its southern end forms a bold mountainous promontory, about 200 miles wide at its widest part, and 125 miles in length, terminating at Lindesnæs, in lat. 57° 59′. This vast territory is bounded on the west by the North Sea, and on the south and east by the Skager Rack, whose inner extremity, so to speak, is the Christiania fjord, which runs from north to south. The fjords have not the grandeur of those farther north. The only level lands on the coast of Norway, Listerland, Dalarne, and Jæderen, are found here. At Listerland three lofty light-houses are in close proximity to each other, and have been built in such a position that to light them separately is a sign of danger. A high-road skirts the coast from Christiania to Cape Tungnæs, a few miles north of Stavanger, a distance of 500 miles, where the Bukne fjord prevents farther progress. This is a continuation of the highway which runs along the shores of Sweden and Norway from Haparanda to Christiania, a distance of about 2000 miles. There are numerous rivers, upon whose waters an immense number of logs are floated, for large forests are very common.

The valleys contain some of the best agricultural districts of Norway, whose farming population is very unlike what we have described in the mountains. On the many comfortable farms nearly all the houses are painted white, with old-fashioned Dutch red-tiled roofs. Pianos, books, and periodicals

show the culture of the people, whose dwellings are surrounded by orchards and gardens; charming views of sea and coun-



FARM OF HOF, IN AKER.

try are seen all the way from Christiania to Drammen, and, in fact, along the whole coast the drives are extremely beautiful. The picture representing Hof gives a good idea of the houses of a substantial farm.

On a Sunday the farmers go to church with their families in different fancy carriages and carioles. The men usually wear high silk hats, or felts with broad brims, gray or black in color; in summer they wear linen dusters. The women, in their hats, bonnets, shawls, and jackets, are dressed like farmers' wives in England or the United States. After church the people hold their weekly gossip meetings.

Norway is a peculiar country, in that its cities and large towns, with few exceptions, are situated on the coast. These are chiefly interested in the fisheries and the timber trade. Those devoted to the lumber business are built on or near the mouths of rivers and streams which rise among and flow through the part of the country where vast forests are found; while those engaged in the fisheries have been located in the most advantageous geographical position. Some of the towns are rising in importance; others are standing still, or in their decadence, as the herrings leave this or that part of the coast.

Most of these are built to suit the irregularities of the rock-bound shore or stony hills which enclose them on all sides, and the houses are perched on every jutting rock, producing a singular effect. The cleanness of the streets is remarkable; the houses are of wood and well painted. One misses the pleasure-grounds of the Swedish towns. There are no manufacturing centres, neither great iron industries in Norway. Some of these towns, though small, are very rich; some of their merchants are millionnaires; they own large numbers of vessels, which are sent to every part of the world: the carrying-trade of Norway is very extensive. The little town which impressed me the most for its activity was Arendal. A few years before it had been destroyed by fire; wooden houses had been replaced by stuccoed brick, and the stores had windows of large plate-glass imported from France.

The public peace is kept by a very few policemen, for they are a law-abiding people, and ruffianism and rowdyism are unknown. The configuration of the country precludes the making of railways, except at such an immense cost that it would not be remunerative; but steam communication by water is ample.

Often during the summer months I have met on the steamers a crowd of persons called Läsare (pietists), who were looked upon by the quiet people as a kind of fanatical and emotional religionists. As they come on board they sing their hymns, which they keep up during the passage, on their way to or from some camp-meeting.

Knowing the hospitality of the people, it was my custom, when I saw a house which attracted my attention, to stop my horse before it and go in. I had, after a couple of hours, left Holmestrand, a picturesque village at the base of wooded cliffs, near the water, and had passed the hamlet of Sande, when I came to a fine house, and, alighting, entered the grounds. To my surprise, I was accosted by two young ladies dressed in the latest fashion. I saw at once they were not farmers' daughters, and excused myself for the unceremonious manner of my approach, and was in the act of retreating, when they begged me to stay.

The house into which I had intruded was the residence of a judge, who was summoned by one of the young ladies, when he gave me a greeting in English. He was somewhat elderly, thin and wiry, with a sunburnt face. He had just left the plough; for, although a man of learning in his profession, he was not above the doing of hard work on his farm.

In the course of conversation we spoke of the laws of the country, and I listened with great interest to the solemn oath administered to witnesses in Norway, and the impressive and elaborate exhortation which accompanies it, in accordance with the 8th article, 13th chapter, and 5th book of the laws, showing the religious character of the people, and how sacredly they regard the truth.

Every person who takes an oath lifts up three fingers; that is, the thumb, the forefinger, and the middle finger. By the thumb is signified, "God the Father;" by the forefinger, "God the Son;" by the middle finger, "God the Holy Ghost." The other two fingers are bent down in the hand; the larger of these signifies the soul which lies hidden in man, and the smaller the body of man, because it is little—just as the body is of small account compared with the soul. The whole hand typifies the one almighty and eternal God and Creator, who made man and all things in heaven and on the earth.

The exhortation or address on this occasion is calculated to make a solemn impression. It begins: "Whatever person is now so ungodly, corrupt, and hostile to himself as to swear a false oath, or not to keep the oath sworn, sins in such manner as if he were to say, 'If I swear falsely, then may God the Father, God the Son, and God the Holy Ghost punish me—so that God the Heavenly Father, who created me and all mankind in his image and his fatherly goodness, grace, and mercy, may not profit me; but that I, as a perverse and obstinate transgressor and sinner, may be punished eternally in hell.'" It proceeds at considerable length, and with a good deal of repetition, in the same awfully serious strain, and then concludes as follows: "Whatsoever person swears falsely, it is as if he were to say, 'If I swear falsely, then may all that I have and own in this world be cursed: cursed be my land,

field, and meadow, so that I may never enjoy any fruit or yield from them; cursed be my cattle, my beasts, my sheep, so that after this day they may never thrive or benefit me; yes, cursed may I be, and everything that I undertake.' O man! reflect on this very carefully, and mark what a dreadfully hard and severe sentence he who swears falsely pronounces upon himself. A pious Christian heart might well be alarmed and tremble when a false oath involves such consequences; when a perjured person takes himself away from God, excludes him self from all his benefactions, temporal and eternal, separates himself from the whole Christian community, and will be lost and damned, body and soul. Therefore, every Christian should keep himself from false oaths and swearing lightly, forasmuch as his soul's welfare and salvation are dear to him. May God Almighty grant this to us all, through his dear Son, our Lord Jesus Christ. Amen."

Running through the promontory are several long and interesting valleys, among them Sætersdal, where dwell a remarkable people. From the city of Christiansand, which has a population of about 12,000, a good driving-road goes a little beyond the church of Valle, about 98 miles from the city; after which a bridle-path leads 23 miles farther, to the Bykle church, whence another extends to the high-road of Thelemarken, or to Stavanger.

A peculiarity of the valleys of the most southern part of Norway is that they run from north to south. In summer the route to Sætersdal can be undertaken partly by water, by small steamers on the Kile and Bygland lakes, at the lower end of which may be found comfortable quarters for the night. The tourist exploring this valley must make up his mind to rough it. Food and accommodations are of the plainest kind, and hosts of fleas of the most voracious species prevent the thin-skinned from sleeping. The Sætersdal people have the reputation of being uncommonly dirty, but I did not find them worse than those of other mountainous districts. They are all alike in the absence of cleanliness, though there are exceptions. Often they sleep on sheepskins, without a particle of clothing on them.

The people of Sætersdal are the tallest and most powerful in Norway, and, I think, of the whole peninsula. I find a statement in one of the annual publications of the Turistförening, that the average height of the men, as taken by a gentleman at Osstad as they came from church, was five feet ten

COSTUME OF SÆTERSDAL.

inches. Their costume is very peculiar. The men wear pantaloons which extend to the armpit, and a short vest adorned with silver ornaments. The women have the shortest dresses in Norway, their dark blue-black woollen skirts, adorned at the bottoms with bright borders, reaching just below the

knees, generally showing their garters, which are made of bright woollen bands. This costume displays to great advantage their well-shaped limbs, of which they are very proud.

SÆTERSDAL WOMAN.

The beholder must not be too prudish when they bend forward in cooking or other occupation, for he must often see higher than the garters. The dresses of the women are trimmed with many silver ornaments, large peculiar brooches fas-

ten the upper part, and sometimes belts of copper, of fine workmanship, are seen around the waist.

Here, as in Thelemarken, are seen old houses with piazzas, while some have still the primitive hole in the roof for the escape of smoke, as described in Vol. II., Chapter XXV. Here is also found the stabbur (described in the same volume), a structure of peculiar shape. At Osse there are two, with carved door-posts and crosses over them, which in olden times were thought to be a protection against witches.

The inhabitants of Sætersdal in disposition and character are in many respects unlike the Norwegians. They are quarrelsome when under the influence of liquor, and use the knife freely. I know of no part of Norway where the people are more addicted to the use of ardent spirits; but I must say that wherever I have been among them I have been most kindly treated, and many are free from the vice of intemperance.

At Valle I stopped at a farm belonging to my namesake, Paul Paulsen. He could not understand how I could speak Norwegian, and insisted that, if I was not one of his countrymen, my father was. On his asking my name, I answered "Paul." "Was your father also called Paul?" When I replied in the affirmative the good fellow shouted, "Then you are Paul Paulsen, and surely you are a Norsk" (Norwegian). From Sætersdal I wended my way across the mountains to Thelemarken.

CHAPTER XXXVI.

Thelemarken.—A Fine Type of People.—Costumes.—Drawbacks of Travel.—A Room in an Old Farm.—Entrances into Thelemarken.—The Bandaks Vand.—Silver-Mines of Kongsberg.—The Farm of Bolkesjö.—A Rich Farmer.—Interesting House in Bolkesjö.—Lake Tin.—The Rjukandfoss.—Lake Silgjord.—My First Acquaintance with Silgjord.—Following Droves of Cattle.—Entertaining my Thelemarken Friends.

THELEMARKEN is one of the most characteristic provinces of Norway; it was always with pleasure that I travelled through its valleys and mingled with its inhabitants. These are tall, well-built, graceful, and intelligent-looking, reminding me of the Dalecarlians in Sweden, described in Vol. II.

The province is divided into Upper and Lower Thelemarken. In Lower Thelemarken, as in Sætersdal, the men wear pantaloons reaching nearly under their arms, but dark in color and of a different fashion, and a very short and oddly-shaped waistcoat, over which is a white jacket, still more strange in shape; the buttons are of silver, and the whole is far from pleasing. The women are dressed in dark, thick vadmal, longer than in Sætersdal, with similar bright borders at the bottoms of the skirts; the waist is peculiar, being a low bodice, with straps crossing the shoulders, over which the high-necked and long-sleeved chemise projects; to this is usually added, when out-of-doors, a short loose jacket. At church, or on other formal occasions, they wear gloves and cloth stockings, both embroidered with gaudy flowers; the head-dress consists of a silk kerchief arranged as a turban, its ends falling to the waist behind.

A great drawback in travelling in this province is the poor fare at the stations; the food is of the plainest kind, and, to one unaccustomed to it, not very appetizing. The valleys are

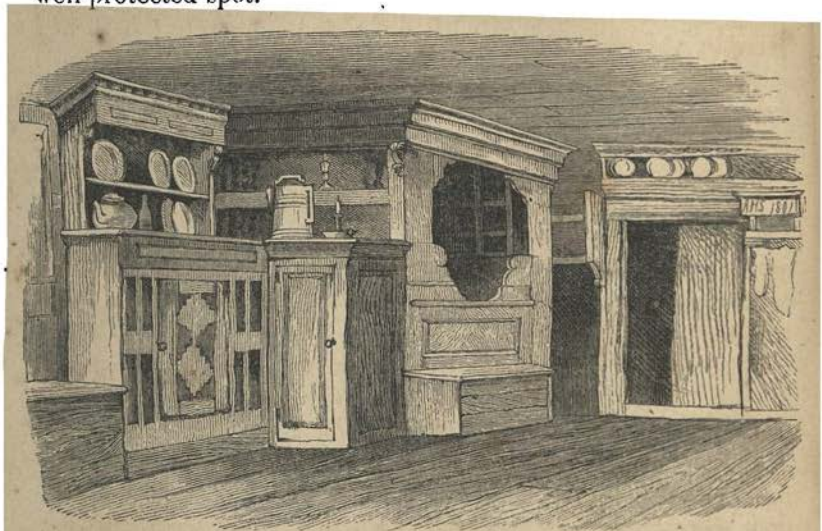
very irregular in every direction, and most of the means of communication are by simple parish roads, which lead to out-of-the-way places and to old farms.

Among the most characteristic styles of building on these old farms is the stabbur, where the wearing apparel and stores of the family are generally kept. In the dwelling-house one sees quaint rooms where are found the old bedsteads reached by a high step; shelves on which is kept the Bible or some sacred book; cupboards with old china, mugs, etc.; here and there biblical inscriptions, and ancient seats made of a single log.

STABBUR.

The traveller enters Thelemarken either by water by the Eidanger fjords to Skien, and thence by canal to Nordsjö, or by land from Christiania, by Drammen and Kongsberg. From the north a magnificent high-road from Odde on the Hardanger crosses to Röldal, the greatest elevation being 3500 feet above the sea; then over the Haukelid down towards Silgjord. Another route branches off to the south by the Ban-

daks Vand, upon the shores of which is the hamlet of Laurdal, where, in contrast with the wild district of Upper Thelemarken, one sees large elm, linden, aspen, ash, alder, and maple trees; the apple, cherry, and walnut—the last not common in Norway—were here loaded with fruit. In the fields they are so trimmed that their shade cannot retard the growth of the crops. The lake is 210 feet above the sea, and Laurdal is a well-protected spot.



INTERIOR OF A ROOM IN THELEMARKEN.

Bandaks Lake is 30 miles long, but hardly a mile wide; the scenery is wild, and the water of a deep olive-green; the neighboring mountains are clad with fir and pine to their tops. From this lake, through a series of other lakes, one may go to the sea, with the exception of a drive of 14 miles from Strængen to Ulefos.

One year, towards the middle of August, I found myself in Kongsberg, which has a population of 5000 souls, and is built on the shores of the Laagen, 500 feet above the level of the sea. This town is celebrated for its silver mines, the most productive of which is the Kongens Grube, which has already reached a depth of 1800 feet.

Leaving Kongsberg, a drive of twenty miles brought me to a forest on a plateau 1700 feet above the sea; descending a ravine through a dark wood, suddenly burst into sight the Bolkesjö farm, 1240 feet above the sea. I know of no farm in Norway so picturesquely situated, and none with such peculiarly superb landscape. It was nestled among fir-clad hills, whose dark color contrasted with the green meadows and fields which they surrounded. The place was partly hemmed in by barren mountains, on which were seen patches of snow. Here in a steep valley, two lakes, apparently overlapping each other, are noticed: the Bolke, of a triangular shape, 1000 feet, and a little beyond the Tol, 690 above the sea-level. Everywhere little streams trickled down the hill-side, filling the air with the sweet music of their waters.

Ole Gulliksen Bolkesjö, the owner of the place, belonged to one of those old Norwegian families who trace their genealogy for centuries. He was worth about a quarter of a million dollars, and was a true type of a bonde—working in the fields like any one of his farm hands.

The stue, or house, was in unison with the surroundings. It had an upper story; in the lower every-day room was carved in the wood 1778 (the date of the finishing of the structure), and "Soli Deo Gloria." In the upper room, two beds, like the berths of a ship, had been built along the walls; they were painted blue inside, with the exterior ornamented with highly-colored flowers. By the inscriptions in old Norwegian one could at once know the religious feelings of the builders. Over one was written, and badly spelled, "May God send seed to all sweet creatures." In another part I read, "Houses and goods are inherited from parents, but a sensible woman comes from the Lord." Somewhere else, "Trust in God:" the remainder I was unable to translate. There were other inscriptions besides. In a corner was a cabinet, with the letters O. E. S. B., under which was 1797.

About seventeen miles west of Bolkesjö, the lower end of Tin Lake is reached, upon the water of which plies a little steamer. The shores of the lake are thoroughly Norwegian, with rugged mountains covered with forests to their very tops.

Towards the northern portion, on the western shore, one enters a part of the lake called Vestfjord, running east and west; the scenery increases in beauty, the landscape reminding one of the Hardanger. Leading from this fjord is a fine narrow valley, called Vestfjorddal, on the left of which Gaustad rises 6000 feet. It is celebrated for the Rjukandfoss at its end, one of Norway's highest and most beautiful water-falls. The valley terminates abruptly, closed by gigantic walls, but the spray of the turbulent waters is seen long before the fall is reached.

The Rjukandfoss (reeking or smoking water-fall), plunges into a chasm from a height of 780 feet over a perpendicular ledge on the table-land. It is formed by the river Maan, which rises in the Mjös Vand. The sight is appalling as the eye seeks the depth below amidst the roar of the water: it is a fascinating spot.

Leaving the Rjukandfoss, I travelled towards Lake Silgjord, a charming part of Lower Thelemarken. At its upper end are the valleys of Morgedal, Flatdal, and Grundingsdal, which abound in fine mountain scenery.

One of the most fruitful regions of Lower Thelemarken is south of Lake Silgjord, in the valley where its outlet finds its way towards Nordsjö. On both sides of the stream, on the hills overlooking the flat dale in which the river flows, there are numerous fine farms, with large houses and buildings, which give a fair idea how the well-to-do farmers of Thelemarken live. This district is known under the name of Bö.

I went to Silgjord for the first time in the following manner: I had become acquainted at the sæters in Upper Thelemarken with a number of bönder, who grazed their cattle there in summer; when the season was over I came down with them from the mountains, following the horses and cattle, intending to go with them to the horse fair in Silgjord, and to the cattle show a few days after in Skien. The herds belonging to the farmers joined, till at last there were several hundred head of cattle with many horses. At dusk we would stop at special places built for the purpose, where the animals were penned for the night. In the cortege were also many carts loaded with the produce of the dairy.

THE RJUKANDFOSS.

At Silgjord I had, through the kindness of a friend in Christiania, secured a number of rooms for my friends and myself at the store of the place, which was also an inn. He had tried his best to get me quarters at some farm, but all the farmers excused themselves, being ashamed to receive a stranger in their modest dwellings. On the way down I had made some friends, and invited them to stay with me during the fair; they accepted the invitation with pleasure, and put me down as a very good stranger. When I made my appearance with my bönder friends, in their odd Thelemarken costume, the owner of the place remonstrated; he said he thought the room had been secured for gentlemen and their wives. I answered, "Never mind; they are honorable, straightforward bönder, well-known in your district." I ordered dinner for twelve. He said he could not accommodate me, that he had no food, no bread, etc.

At last I became annoyed, and told him that it was all nonsense; that a good honest farmer, even if he wore a peasant costume, was as good as anybody. Most of the men who were with me were white-headed, and belonged to the best class of bönder. The rooms had been secured for me, and I insisted on having them and on treating my friends. Finally, I said that, if he refused, I would expose him in the public print. He then relented, but with bad grace; he never gave us enough to eat, and his charges were exorbitant. This misunderstanding soon spread, and I became very popular with the bönder. Since that time I have had many a good time among my Thelemarken friends.

CHAPTER XXXVII.

Upper Thelemarken.—Mjös Vand.—Superb Trout.—A Strange Dr. Dunk.—Charms of Pedestrian Travels.—Popularity of the Remington Rifle.—Totak Vand.—Costume of Upper Thelemarken.—Old Buildings.—Raudland Church.—Legend of the Brown Horse of Furnæs.—Raudland Farm.—Berge Farm.—Primitive Courtship.

Upper Thelemarken is rich in the sombre and weird landscape of its deep valleys, and its mountains are dotted with numerous lakes. The hunter roams over its forests in search of game and wild reindeer; the angler finds in its streams and lakes trout which send joy to his heart.

A few miles from Rjukandfoss is Lake Mjös Vand. A mountain-path from the plateau above the fall passes through a grassy region, over which are scattered many sæters. Mjös Vand is 2830 feet above the sea, and has a length of 27 miles. Its shores are very irregular, its southern end dividing into two long narrow branches, while on the north it terminates in the midst of wilder scenery. A short distance from Aamotsdal Church the good road gives place to a rough one, over which, however, a cart can pass, leading to the lower end of the lake called Kromviken, a route which I have often taken. The shores in many places are covered with large tracts called *myr* (moor); these are dangerous, being covered often only with a thin coat of grassy soil not strong enough to support the weight of a man.

Here and there is a farm dating back almost to prehistoric ages. A new chapel, where service is held several times a year, and a school, stand close to the farm of Hovden. The sæters are mostly owned by the neighboring farmers, who derive a modest revenue by letting them. Many a pleasant day have I spent among the people of this lonely region.

The amusements here are few, chiefly dances at the farms.

Occasionally they have a bränvin frolic. When one of them goes to the town each farmer contributes a certain sum of money for buying the liquor, all of which when bought in town is put in one keg; the division is made at the farm. I remember once, on arriving at a house, the farmer said, "Paul, Dr. Dunk has come!" This is the name they sometimes give to the keg. Not knowing what he meant, I said, "I am very glad. Has he gone hunting in the mountains?" He perceived my mistake, but said nothing. In the evening I said, "Where is Dr. Dunk? it is strange that he has not returned." In a confidential way he replied, "The doctor is here;" and, taking me into a small room, whispered, "here he is; look at him." I looked in the direction indicated, and saw the keg; laughing, he added, "This is Dr. Dunk; when he comes to us who live in the mountains he is always welcome, for he makes our hearts merry." Then the frolic began; the farmers assembled, and did not leave the place till the keg was empty, and each had drank his share. On the morrow they had the usual violent headache, and the farmer said, "Paul, Dr. Dunk is never so nice the day after his arrival as the day he comes to us."

One of the great charms of travelling in the country is that enjoyed by the pedestrian, who, leaving the highway, follows the bridle or foot paths leading to the mountain passes, from which he obtains views of which the roads can give him no idea.

There are few lakes where trout are so abundant as in Mjös Vand. There is hardly any clear river or lake in Norway where this fish is not found. There are really only two varieties, the *Salmo eriox* and the so-called Alpine trout (*Salmo alpinus*). In certain lakes, especially in those of Upper Thelemarken, the first attains a very large size; I have seen many weighing from six to twelve pounds, and in rare cases they reach twenty pounds. Both frequent the rivers and lakes; the latter, however, being found only in the north. In September and beginning of October they ascend the rivers to spawn, and large numbers of them are caught with nets, and salted for winter use. The flavor of this fish is most agreeable, and the flesh of a rose color; the farmers often cook the roe in cream—a delicious dish.

The huntsman and fisherman must know where to go. There are lakes and rivers in the mountains which swarm with trout. I have seen hundreds, even thousands, of wild reindeer together, and much skill is required in order to approach them. One may be weeks without seeing a single one, and success depends on the direction of the wind. The deer always march against it, and with a change in its course will quickly disappear. Nothing afforded me greater pleasure than to go alone, with my Remington, a splendid light weapon, in search of these animals. This rifle is very popular among the Norwegians, who seem to prefer it to any other.

PTARMIGAN.

From Mjös Vand a bridle-path leads to Totak Lake, 2170 feet above the sea; it is about 17 miles in length, and widest at the south-easterly extremity. Its deep fjords penetrate like bays into the dark mountains, several of which rise 3000 feet above the sea; the contrast of deep-green water with the rocks produces a very striking and sombre effect. The costume of Upper Thelemarken is also less grotesque than that of the lower part of the province. The men dress in dark blue or black jacket, waistcoat with silver buttons, and pantaloons of the same woollen material. The women wear a kerchief in a peculiar way over their head, and a dark homespun skirt.

Many of the farm buildings are very old, some being occupied by the descendants of families who lived there long before the time of the plague (1350), and who were spared in that pestilence, which swept over the land like the shadow of death. Touching legends are told of that dreadful time, when the population of whole districts was destroyed.

By this plague, which desolated Europe, whole districts of

Sweden and Norway were depopulated; and there is a tradition that in the province of Vermland only one man and one woman were left. The scourge also appeared in Iceland and Greenland: as no record of the flourishing colonies of the latter is known to exist, the supposition is that the entire population was at that time destroyed.

The church of Raudland is very old. As I left its churchyard I came to a hollow which seemed peculiar. It was the spot which tradition points out as the grave of *den brune Fornæs hest* (the brown horse of Fornæs), the subject of a legend of the days of the *Sorte död* (black death), called usually by English-speaking people the "black plague." The mountaineer who was with me became very sober as he told me the story of the noble animal, as follows:

The black plague reached Norway in 1349 and 1350, visited its wildest mountain regions, and penetrated the remotest districts. In many places all the inhabitants of the hamlets and the farms perished, no one being left to tell the tale. The scourge came also to Thelemarken, and swept like an avalanche over Raudland and Mjös Vand. On the bank of the latter opposite Hovden was the farm of Fornæs, to which the famous horse belonged. At that time there was no church at Hovden, and no church-yard, and the people had to worship and be buried at Raudland. Day after day, while the pestilence raged, the horse came to the church-yard bearing the bodies of the dead; and after awhile he began to know the way so well that he needed no guidance. Soon there was no one with strength enough to follow him; but, when the sleigh had been loaded with the bodies, he would go by himself to Raudland, and, after the people in charge of the graveyard had performed the burial rites, the intelligent animal retraced his steps homeward alone. The faithful creature had no rest, for as soon as he had returned to Mjös Vand it was time to go again with others of the dead; very often he was so weary that he staggered through the deep snow, sinking into it, and hardly having strength to extricate himself. When the snow was hard, he would go and come quickly; if it was soft, he had to travel very slowly. The time finally arrived when the peo-

ple of Mjös Vand were all dead except one man. The plague attacked him; and, knowing that it was fatal, he placed the snow-shoes on the horse's feet, harnessed the animal, tied himself with a cord upon the sleigh, and then died. The horse went slowly along with the last inhabitant of Mjös Vand towards the church-yard of Raudland; but on his way, when he had reached Falkeriset, 3040 feet above the sea, the highest hill between Mjös Vand and Raudland strand, he lost one of his snow-shoes. Finding that he could go no farther, as he kept sinking deeper and deeper into the snow at every step, he gave a powerful neigh, as if to call for help. The people of Raudland hearing him, came with other snow-shoes, and he continued his way. After the body had been buried the horse entered the church-yard, went to the grave of every one he had brought from Mjös Vand, and stopped a little while before each. His work was now done; the people he had known were all buried there; nobody needed his services any more. Slowly he went away, with his head down, towards one of the hollows between the moraines, a little east of the church; and there, breaking his snow-shoes, he rolled himself into the hollow, put his head upon his breast, gave a sigh, and expired.

"This place," said the peasant, pointing to the hollow, "is still called *heste dokken* (horse hole), and *Fornæs brun* is still remembered by us; he was a noble horse, and we love to tell the story to our children as our fathers told it to us, so that his name may go down to future generations. Yes," he added, "it was a sad time for Norway; at Ödefjeld, at the other extremity of the lake, only one married woman was left."

The parsonage was at no great distance; the pastor had two other churches under his charge, one of which was that of Mjös Vand, where he held services six times a year. He was somewhat of a poet, and had published some hymns; he was frank in his manner, liberal in his views, and truly hospitable.

The Lutheran Church is the national church of Norway and Sweden, and it is only within recent times that other sects have been allowed to build houses of worship; but even to this day certain offices cannot be held except by Lutherans.

Not far from the church is the ancient farm of Raudland,

with a stabbur, said to have been built about A.D. 1000. Near the shore is the farm of Berge, embracing eight buildings—the dwelling-house being a type of Thelemarken architecture. On the left of the entrance was a room about 20 feet square, with the usual open fireplace in the corner—furnished with a large table, painted red, a wooden bench, and a few oddly-shaped chairs, each made of the trunk of a tree; the windows consisted of small panes of glass. In two of the corners of the room beds had been constructed which resembled the bunks on shipboard. These bunks were gaudily painted, and the frame made fast to the ceiling, which was not more than 8 feet high. A bright-colored sideboard, as tall as the room, and fastened to the wall, contained plates, glass, spoons, etc. Three windows, in two of which were pots of flowers, gave sufficient light. The floor was dirty, for it was only washed every Saturday, and people were continually going in and out with muddy shoes. Facing the dwelling-house was the stabbur, probably over five hundred years old; but I saw much older wooden buildings in various parts of Norway. The picture (page 419) gives a good idea of a stabbur. I ascended a steep ladder to the upper story, to which entrance was gained by the use of an enormous key; the door turned upon strange-looking hinges, and the only light came through the fanciful open wood-work of the piazza. There was an aspect of the Middle Ages in the dark room, for everything in it was old and odd; the principal objects were huge chests, upon which were written the names of the owners; each of the three daughters of Rickard, the owner of the place, had her own chest marked with her name, whose contents would form an important part of her dowry, in the shape of wearing apparel and trinkets. Upon cross-poles hung fourteen sheepskins as white as snow; women's skirts and dresses embroidered in silver; several table-cloths, with fanciful crochet-work at each end, and blankets of bright colors from Vossevangen, were disposed about the room. There was a bed where formerly the husband and wife slept; but since the girls had grown up all had chambers in the house previously described. The room below contained on one side large grain-bins placed

closely together; also stores of mutton, salted bacon, bags of flour, and baskets containing wool, some of which had been carded. Rickard and his wife Sigrid were exceedingly hospitable; and Torbjör, Sigrid, and Ingeborg—their daughters—were models of thrift. The many pleasant days I have spent at Berge will long be remembered.

Among the ancient customs of the rural population that still prevail in many parts of the country is that of "bundling," called here *frieri*, which really means "courtship." I have occasionally witnessed it, and it has afforded me at times much amusement.

On Saturday it is usual for the parents, who wish to have a good night's rest, and do not want to be kept awake by constant knockings, to leave the doors open; for, if they are blessed with many daughters, they may be sure that there will be no end of visitors. The damsels often live far away; consequently the lovers may have to walk miles, perhaps, on very dark nights, over snow and frozen lakes, or through winding and dangerous mountain-paths, when the weather is intensely cold; but nothing seems to check their determination except a drenching rain-storm. It is generally arranged that the hour of arrival shall be after the old folks have retired.

This absence of guile in many districts can hardly be believed or conceived by a stranger. When returning tired and wet from the hunt, or some mountain excursion, to a friend's farm, I have been put to bed by some female member of the family as if I had been a child, and tucked up with the admonition to sleep quietly, with a pleasant "good-night." Early the next morning a cup of coffee is brought to you in bed, either by mother or daughter.

CHAPTER XXXVIII.

Songadal.—A Storm in the Mountains.—Lonely Horses.—Coming to a Sæter.—Mountain Wandering.—Arrival at Bærunuten.—The Approach of Winter.—From Grungedal to Haukelid Fjelds.—The Staa Lake.—Haukelid Sæter.—A Snow-storm.—Knut Björgufsen.—Havredal Farm.—Ole Havredal.—A Feast at Havredal.—On the Way to Röldal.—Welcome at Röldal.—Across to the Hardanger.

THE scenery of the upper end of Lake Totak is impressive, the Raudland fjelds rising 2840 feet above its deep green water. From here the narrow Songadal, in one place entirely blocked by immense rocks, wends its way in a north-westerly direction. While roaming alone towards the Songa Lake, intending from there to reach the mountain farm of Bærunuten, I was overtaken by a fearful storm. The rain was cold, and the wind was blowing almost a gale; the mist was so thick that I could not recognize the outlines of the mountains as landmarks, and I lost my way. As I was wandering, trying to find the path, I came upon a sæter, where I found two men from Lower Thelemarken, who had charge of some cattle. The sight was most welcome, for it was getting dark. They proved to be old acquaintances. Great was their astonishment when I entered the hut; they tried their best to entertain me, put more logs on the fire, and gave me of their homely food with delight. Kittel, a bright fellow, said, jokingly, "Friend Paul, this is the Kong's hotel;" and we had a good laugh over it, for the place was very uninviting. Dirty straw on the ground was our bed, and the sheepskins were far from clean. They apologized for the poor accommodation they had to offer me, and said that, if it had not been so late, they would have taken me to a girl-sæter, "which you know, Paul," they added, "is much cleaner than those belonging to men."

The next day, the weather having become fair, I bade good-

bye to my friends and continued my hunting all alone, the district being well known to me. On the way I was suddenly startled by a heavy tramping, and a group of eleven horses, which seemed overjoyed at the sight of man, came towards me gambolling and frisking; they belonged to different sæters, and had been left to browse for the summer. One day it was dark when I reached a sæter, a plain stone hut, where I could see the light of a blazing fire through the cracks of the door, and hear the sound of voices. I knocked, and said, "Won't you open the door to the stranger?" Soon the wooden bolt, which is used to prevent the cattle from getting in, was drawn, and I saw two women, one a young girl of about twenty years, and the other older. The hut was clean; a bed was perched high up, and on one side was the fireplace; on the shelves were vessels containing milk. The women in charge did not compare favorably, either in looks or tidiness, with those we had met in the Hardanger sæters. This sæter had 26 milch cows, 20 head of cattle, and 2 horses. The place was on the bank of a mountain stream—the Valasjö—which empties into the Songa Vand.

The journey northward over the Sauerflot was very pleasant, as the plateau was undulating, the ground firm underfoot, and the morasses hard on account of the dry summer. Cairns of stones several feet in height had been placed at short distances apart, almost always in sight of each other, to show the way, and the country was covered everywhere with lichen.

Not far from Songa Vand is the lonely mountain farm of Bærunuten, where I was received with great kindness by the family.

The sudden cold snaps warned me that winter in the higher regions was coming. From Bærunuten I went into Grungedal, and found myself on the superb high-road which crosses from Hardanger to Christiania, intending to traverse the Haukelid fjelds to Röldal, and thence to Odde. On the way I noticed in deep bogs large fir-trees—no doubt remains of extensive forests, where now young trees could not grow. The swamps in many parts of Norway are encroaching on the dry land.

The darkness at night in deep valleys overshadowed by mountains is so intense, before snow has fallen to cover the ground, and when the sky is cloudy, that sometimes one cannot see two steps before him; I have myself, on several occasions, after moving a few paces from a door, been unable for awhile to find it again, and felt the same sensation of bewilderment that I have experienced in a blinding snow-storm.

From Grungedal, a poor district with a few farms, the road ascends gradually to the Haukelid fjelds, skirting many lonely lakes. On the shores of the Vaagslid Vand is the comfortable farm of Botnen, and farther on Vaagslid farm. The highest lake, and the last on the route, is the Staa, 3010 feet above the sea: there ended the road which is in the course of construction; the laborers had left for their homes, as at that late season of the year work had to be suspended.

On the shores of the Staa Vand is Haukelid sæter, which is now a comfortable mountain-house, having been built by the Government for the accommodation of travellers. I reached the place just in time to escape a snow-storm, which lasted the whole of the night and part of the following morning. It was the last day of September, and the year before at the same spot I had experienced similar weather; the difficulty I had in crossing the mountains with my friends from Röldal came back vividly before me, for we had to tramp in the new-fallen snow, often sinking to our waists, and falling against the partly concealed rocks.

Friend Knut Björgufsen, who had now charge of the place, gave me a most hearty welcome: a good, honest fellow he is, and within the hospitable walls of the house the time was far from seeming long.

When the weather became fair he proposed to me to visit the farm of Havredal, on Lake Bordal, 2830 feet above the sea. I accepted at once, for Ole Ormsen, the owner, was a good friend of mine. Soon after this we started, and, after a brisk walk of four or five miles in an easterly direction, came to the place. Ole could hardly believe his eyes when he saw me. He immediately produced a bottle of spirits, of which he kept a small stock for special occasions; he drank a skål in

my honor, and welcomed me to his farm; a feast was then prepared, and it was late when we retired. To Knut and me was given the guest-room up-stairs, and we slept in very comfortable beds. Ole and Knut came to the conclusion that if I wished to cross to Röldal I must hurry, or the snow might become too deep; and both were to take me there. After another day of feasting at Haukelid sæter, and the drinking of the last two bottles of Knut's port, early the next morning, with a clear sky, we started for Röldal, where we arrived before dark.

Lake Röldal, 1200 feet above the sea, is in a deep hollow surrounded on all sides by mountains. At its northern extremity is the church, and farms are numerous on its shores. Ole and Knut found themselves at home, for, like myself, they had here a number of good friends. Hearty was the welcome given to me by my comrades, who had crossed with me the year before; the same round of feasting was here repeated at different farms—at Rabbi, Hagen, Haugen, Yüvet, and others —where I had to tell all I had done since I had left. Among my friends was old Jakob, who loved to talk about literature and travels while his son-in-law was making boots; he was always sorry when I wanted to leave, and never failed to say, "Come soon again, and have another talk."

The road from Röldal to Odde is very steep after leaving the lake, and traverses a broken, wild region, whose landscape delights the beholder; and after one of these abrupt descents Odde is reached. There I found the inner part of the Hardanger fjord frozen for two or three miles, and the steamer had to lie along-side the ice. Winter had come.

APPENDIX OF VOL. I.

GENERAL GOVERNMENT.

In Sweden the legislative power of the people is vested in the Riksdag (Diet), which is divided into two chambers, called first and second, having co-ordinate jurisdiction. Members of the first chamber are elected for nine years; in the country districts, which include all cities and towns having a population of less than 25,000 inhabitants, by the Landsting (Legislative Assembly of the province), and in the cities having a population of more than 25,000, by the Stadsfullmägtige (Town Delegates). The proportion of representation is one member for every 25,000 of the people. To be eligible to the office, the candidate must be thirty-five years of age or over, and have possessed, for three years previously, real estate valued at least 80,000 kronor, or have received for three years from capital or labor a yearly income of 4000 kronor. Even though possessed of these qualifications, if he lose any of them after election he must at once resign his office. There is no salary attached to the place.

The members of the second chamber are elected for three years. In the country each judicial district (Härad) having over 40,000 inhabitants is entitled to two members. The cities elect one for every 10,000 inhabitants. Small towns of less population are united into one constituency, sufficiently large to entitle them to representation. The election takes place either by direct vote, or by electors chosen by the voters. The right to vote belongs to all persons who own real estate of the assessed value of 1000 kronor, or who lease real estate worth 6000 kronor, or who have an income of 800 kronor from labor or capital. The candidate must be not less than twenty-five years of age. The election is supervised by select-men in the country, and by magistrates in the cities. The members receive a salary of 1200 kronor for every regular session of four months. Those who are not present at the opening of the session are fined, and none are allowed to resign without lawful reasons. The king has the right to veto laws, except those relating to taxes, appropriations, etc., where the Diet has absolute control.

In Norway the legislative power of the people is vested in the Stor-

thing. The cities electing one-third, and the country the remaining two-thirds of its members; these are chosen for three years—the duration of each Storthing.

The elections are made through electors, of whom in the cities there is one for every fifty, in the country one for every hundred voters. To have the right of voting one must be not less than twenty-five years of age, and own a taxable farm, or have leased one for at least five years, or hold a government office, or have a license as master of a trade. In the cities or hamlets one must possess real estate of the value of 1200 kronor.

To be eligible to the Storthing, the candidate must be thirty years of age, and, if an alien, must have resided for ten years in the country. No one who has been elected can decline except for good reasons. During the session they are exempted from the operations of the civil laws, except in criminal cases, and, as also in Sweden, cannot be held to answer for their utterances in the Thing. King's ministers, or persons attached to their offices, or at court, or receiving a court pension, cannot become candidates.

The Storthing assembles every year in Christiania, for a regular term of two months. If a further sitting becomes necessary, the sanction of the king is required, who may for extraordinary reasons convene it in some other place, or call an extra session, in which case it must adjourn before the next regular session.

The Storthing selects from its number one-quarter of its members, who constitute the Lagthing; the other three-quarters form the Odelsthing. Each Thing has a separate organization, and nominates its President and Secretary. The meetings are held with open doors, and the voting is done *viva voce*. Every bill must be brought up, in the first instance, in the Odelsthing, either by one of its members or by the government representative, who is one of the king's counsellors. If the bill passes, it is then sent to the Lagthing. If twice rejected, both chambers meet, and a majority of two-thirds is necessary to pass the act. The sanction of the king is required before the bill becomes a law; but his veto is merely suspensive, for if a bill passes three consecutive Storthings it becomes a law without his sanction. It was in that manner that the law abolishing titles of nobility was enacted.

LOCAL GOVERNMENT.

Sweden is divided into län. The highest executive officer in each is the governor. The next is the Kronofogde (Crown bailiff), of whom there is one in each judicial district, and his subordinates are called länsmän.

Each län is possessed of a Landsting, whose members are chosen by the voters of the towns or judicial districts. This body is composed of

at least twenty members, who receive no compensation, and are elected for two years. It has to deliberate and decide about the general affairs of the län, with regard to its internal economy, the development of agriculture and industries, communications, health, instruction, etc. It holds one regular session in each year, which lasts not longer than eight days; but can also assemble in extra session, either of its own motion or by order of the king, who moreover appoints its presiding officer. It also has the right to impose the taxes necessary for raising the amounts appropriated, and to negotiate loans; but the approval of the Crown is necessary in case of taxes running for more than five years, and in making loans for a longer time than the same period, and also in disposing of public property. To other enactments the consent of the governor is required to be given, and in case of his refusal the Landsting has the right of appeal to the Crown. The relation of the communities to the State is such that, while some of their enactments, to be valid, require the approval of the Crown, which may refuse its consent, yet the latter cannot encroach upon their rights of self-government by imposing unwelcomc measures upon them.

Dependent on the State, but with a great deal of freedom of action, are also the communities within the län, composed of one or more parishes, with their separate administrations. In all parish matters, every taxpayer, with the exception of those paying the very lowest amounts, has a right to vote. The church meeting (Kyrkostämma) of the parish has charge of everything pertaining to the church and its property, public schools, salaries of pastors and teachers, etc., and is formed by all voters of the Lutheran persuasion, with the pastor as its chairman.

At this meeting there are selected for a term of four years a church and a school council. The former manages church affairs, and exercises a kind of disciplinary supervision, while the latter governs the schools. All other parish affairs devolve upon the communal meeting (Kommunalstämma), composed of all legal voters of the community, who vote in proportion to the communal taxes paid by each individual. A board of selectmen is chosen, having from three to eleven members, and constitutes the executive committee of the meeting. It has charge of the property of the parish, levies and collects taxes needed for its purposes, and makes estimates for receipts and expenses, to be submitted to the full body, which, however, can delegate its authority to a committee composed of the select-men, together with three times as many of its own number, which is especially designated for this purpose, and holds office for a term of three years. But only the entire meeting decides about the sale of real estate, imposing taxes for a longer period than five years, about elections, etc. Even the latter, however, cannot sell real estate, or negotiate loans to run for more than two years, without the sanction of the Crown. Every town constitutes a community by itself, its communal meeting be-

ing called General Town Council. But where the population exceeds 3000, the legislative functions are exercised by the Town Delegates, chosen at a General Town Council for four years, to the number of twenty to sixty, according to population. The executive administration in the town, both on its behalf and that of the State, is in the hands of the magistrates, consisting of the Aldermen and the Mayor, who is appointed by the Crown on the recommendation of the burghers, who nominate three persons from whom to make a selection as Mayor. The property is managed by a Board of Finance, selected by the delegates, or, where these do not exist, by the General Town Council.

Norway is divided into Amts, corresponding to the Swedish Län, and its highest executive officer is the Amtmand. The Amts are divided into Fogderier (Bailiwicks), in each of which there is one Foged, who is assisted by Lensmænd—generally one in every parish. In the towns the functions of the Foged are exercised by the Byfogde, who is also invested with judicial powers. The Foged collects taxes and judgments, and generally superintends the execution of the laws.

For communal affairs every parish has a Formandskab, the members of which are chosen by the voters. For important cases a triple number are added. Every Formandskab chooses its own chairman. The administration in the cities is about the same. All the chairmen within an Amt assemble once a year with the Amtmand and all the Fogders to discuss the affairs of the Amt. Appropriations, assessments, etc., are made by them. The decisions of this body are submitted to the Amtmand for approval, with right of appeal to the Crown.

ADMINISTRATION OF JUSTICE.

Justice in Sweden is administered by three different Courts.

Local Courts, composed of { Rådstugurätt (Town Court). / Häradsrätt (District Court).

High Courts (Hofrätt): there are three—one in Stockholm, another in Jönköping, and the third in Christianstad.

Supreme Court (Högsta Domstolen).

The local court in the cities is composed of the Mayor and Aldermen: in the country, of a judge and twelve jurymen (Nämndemän), the latter being elected by the real estate owners of their respective districts. Each judge has within his district one or more circuits. In the larger cities there are, besides, police courts, having jurisdiction in minor criminal offences.

Judges must be graduates of one of the Universities. They are appointed by the King on the recommendation of the High Court (Hofrätt).

They hold office for life, and in case they retire are pensioned. They cannot be dismissed without trial.

In Norway justice is administered by four different courts, three of which have jurisdiction in both civil and criminal cases. These are:

Communal Courts of Arbitration (Forligelses, Kommissioner), before which all civil cases are first brought for agreement, with the object of avoiding lawsuits. The members of this court are elected by the voters.

District Courts, each of which has one judge, in the towns called Town Judge, and in the country District Judge: these in important cases associate with them four assistant judges, appointed by the Amtmand. In Christiania there is, however, a separate City Court (Byret), with a judge and assistant judges, from whose decision appeals are taken direct to the Supreme Court.

The Superior Courts (Stifts Overretter), of which there are five, one each in Christiania, Christiansand, Bergen, Trondhjem, and Tromsö.

The Supreme Court (Höieste Ret).

The Judges are nominated by the King.

FREEDOM OF THE PRESS.

he Press enjoy the utmost freedom, being amenable to the law only publications against public morals, against defamation of character,

A majority of two-thirds of the jury is necessary for conviction.

o man, either in Norway or Sweden, can now be imprisoned for debt ss it has been contracted fraudulently.

COMMUNICATIONS.

Swedish railways	4200 miles.
Norwegian " nearly	1000 "

e new roads are built by the State, while all have to be kept in repair the land-owners, each having a certain length to maintain in good er, proportioned to the amount of land he owns.

The total length of all the Swedish common roads is 35,000 miles.

Norwegian . . . . . 14,000 "

Which of King's roads, or highways, there are in Sweden 12,308 "

In Norway . . . . . 4,350 "

nals in Sweden, 28 in number; the total length is 465 miles.

Norway there are only a few short canals.

DISEASES.

The most prevalent diseases of Scandinavia are scarlatina, typhoid fever, measles, whooping-cough, small-pox (rarely epidemic), diarrhœa, dysentery, consumption, pneumonia, and cancer. The cholera first showed itself in 1832, and has since then appeared at varying intervals more or less epidemically. Intermittent and remittent fevers are very rare. Typhoid fever is the most prevalent epidemic.

The most terrible curse of Norway is leprosy (*Elephantiasis Græcorum*). This is quite common on the west coast, from 59° to 69° latitude, but is rarely met with beyond these. Innumerable experiments and devices have been tried by the medical profession of the country, with a view of finding an effectual remedy for this scourge, but so far without avail. Little of this disease is found in Sweden; only seventy or eighty are afflicted with it, and these chiefly in the province of Helsingland. Five large hospitals have been erected for its treatment in Norway. Of these, the three largest are located at Trondhjem, Molde, and Bergen. These contain, on an average, from 2100 to 2200 patients. Nearly all [illegible] are from the fishing districts.

I visited these hospitals at first with fear and trembling, for [illegible] popular idea that the disease is contagious. The servants of [illegible] pitals are not lepers, and many have been in this service for years [illegible] of the doctors have been attending the patients for long periods and [illegible] one has ever caught it. These hospitals are fine buildings, especially [illegible] at Bergen. Physicians of experience and reputation, whose writings [illegible] known throughout Europe and America, are in constant attendance and devote their lives to the treatment of this malady, which has engaged the attention of the Norwegian Government for years.

To a stranger unaccustomed to see this disease, a visit to [illegible] rooms where the patients are suffering in its different stages discloses a painful sight. In some the fingers had dropped off, in others the [illegible] and body were covered with spots; several were made blind; in some the bones seemed to have disappeared from the hands or feet, rendering the helpless; others appeared almost as white as milk. One poor leper [illegible] seemed to be near his end, had a book of Psalms before him.

Each room had several beds, and everything was of the utmost neatness. The male and female patients were kept separated by a watch.

In the kitchen the cooking was done by steam; the bakery was exceedingly clean, but the worst part to me was the laundry, which [illegible] horrible ideas. The dining-room was pleasant, and the food was [illegible] Some of the patients can do light work, such as making fishing [illegible]

Among those who have made this fearful disease their study there [illegible] great difference of opinion; some think it is hereditary. Many [illegible]

soon as they show signs of leprosy, are taken to the hospital, and often after a few years are sent back apparently cured; but in most cases the disease reappears, perhaps from neglect to take the medicines used as preventives. I think there is no question that it is hereditary. Like consumption, insanity, drunkenness, vice, it may be a long time before it appears; persons well advanced in life get it, and in that case the fact is generally established that one or both of their parents died of it; at other times it is discovered that it has passed over a generation. Dr. Hansen, of Bergen, in Norway, has examined the nodes in this disease, and has been able to find a minute bacillus, which is always present in sufficient numbers to account for the symptom; but he has failed as yet to discover the conditions of its life and development. At Bergen I visited the school attached to the hospital: many of the children to a stranger appeared without any of the symptoms of the disease, while others had it in various stages.

Goitre.—The proof that this disease cannot be attributed to the drinking of snow-water, as is generally believed in Switzerland, is that it is hardly known in Norway or Sweden; I never saw a case among the Lapps; the four or five I met were in sparsely settled districts, and were imbecile, and in two cases perfectly idiotic.

Cretinism and Idiocy.—Persons thus afflicted are generally deformed and puny, unable to walk or speak, and have no idea of cleanliness. I found them in rare instances in mountains and valleys, in wooded and poor districts; but always where the population was scanty, and where intermarriage had often taken place in the same family.

Insanity.—There are in Sweden nine insane asylums, with 1322 beds, and the number of patients averages 1800. In Norway there are ten insane asylums, with 986 beds, and the number of patients treated 1500. Here as in other countries the majority of cases are hereditary. In lonely or thinly populated districts, where the farms are far apart, and where social enjoyment is hardly known, there are the most insane people; many are religiously crazy.

END OF VOL. I.

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